APRIL '57

MODERN TEXTILES MAGAZINE

Specializing in Man-Made Fibers and Blends since 1925

FIBERS

FABRICS

FINISHES

Enka's JOHN BASSILL - - he has been president of four rayon producers - - -

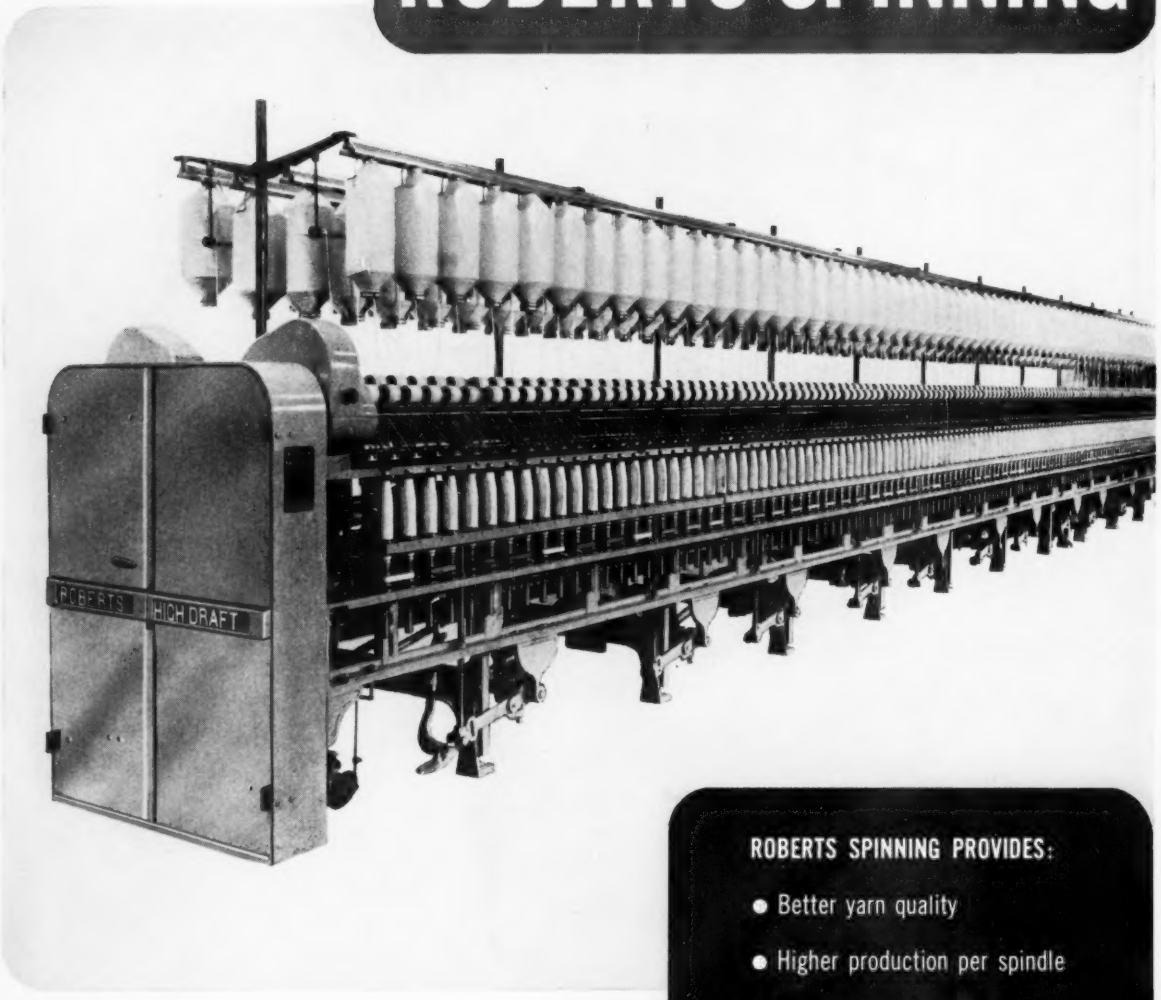
Story page 31

THIS MONTH'S SPECIAL FEATURES

Knitting show preview
Better nylon ropes
Odor inhibiting finishes
Easier dyeing Orlon
Nylon gains in England

AND 16 MORE USEFUL ARTICLES AND EXCLUSIVE REPORTS

ROBERTS SPINNING



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All standard features used on Roberts Spinning Frames can be adapted as Changeovers to your existing frames.

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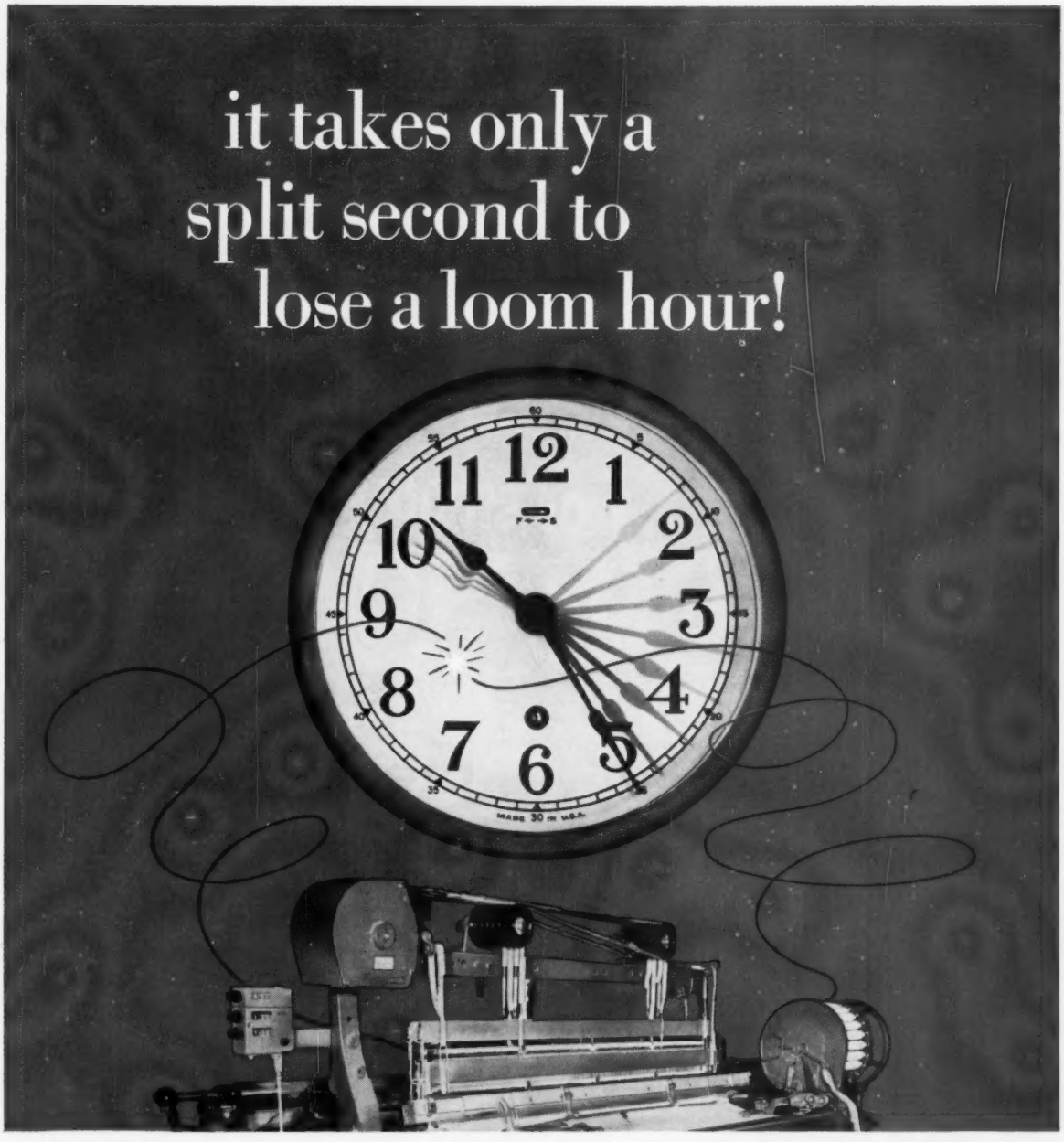
it takes only a split second to lose a loom hour!



Ever count how much money filling breaks cost *your* plant each year?

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ON BEAMS

Use IRC Continuous Process Rayon...uniform mile after mile . . . perfect inch by inch . . . and it costs no more!

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For sound yarn packages...
For smooth delivery...

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SONOCO cones are made to fit the winding mandrel accurately. This feature is combined with special SONOCO cone surfaces, developed through extensive research, to produce a cone which permits precision winding. The result is a sound package that will deliver at even tension under high speed working conditions.

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TEXTILES MAGAZINE *

April, 1957 Vol. 38, No. 4

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Established 1925

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The Principal Trade Groups

Man-Made Fiber Producers Association ..... Empire State Bldg., New York
National Federation of Textiles, Inc. ..... 389 Fifth Ave., New York
American Association of Textile Chemists and Colorists ..... Lowell Techn. Inst., Lowell, Mass.
American Association for Textile Technology, Inc. ..... 100 W. 55th St., New York
Silk and Rayon Printers and Dyers Ass'n of America, Inc. ..... 1450 Broadway, New York
Synthetic Organic Chemical Manufacturers Association ..... 41 E. 42nd St., New York
Textile Distributors Institute, Inc. ..... 469 Seventh Ave., New York
American Rayon Institute ..... 350 Fifth Avenue, New York

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Delaware Rayon Shut Down

Permanent shutting down of the plant of the Delaware Rayon Corp. at New Castle, Del., was made known last month. Owned by Mohasco Industries, Amsterdam, N. Y., the plant has been in operation for 30 years. A company spokesman said that it was to small and uneconomical for further operation. The plant had been making rayon staple fiber since Mohawk Carpet Co. installed new machinery in 1952. It had about 110 employees.

Nylon Blood Artery

The Chemstrand Corp. has announced successful development and medical use of a new nylon artery to replace the vital human aorta where it branches to carry blood to the legs. More than 200 persons are now reported, less than eight months after the first medical meeting on the nylon "aortic bifurcation graft," to be walking testimonials to the success of this new replacement artery. The Y-shaped artery was perfected by the same physician-scientist team that developed the original Chemstrand nylon "no-kink" artery announced in 1955—Dr. W. Sterling Edwards and Dr. James S. Tapp.

Day Heads NFT Group

George H. Day, II, of Chicopee Mills, Inc., was re-elected chairman of the Monofilament Automotive and Outdoor Furniture Fabric Weavers Group of The National Federation of Textiles, Inc., at the recent annual meeting in New York City. Re-elected to the group's executive committee, were: Martin Frank, Laurel Plastics, Inc.; D. B. Pitman, E. W. Twitchell, Inc.; Thomas A. Roberts, Ellenboro Mills, Inc., and F. Gresham Wall, Columbus Fiber Mills.

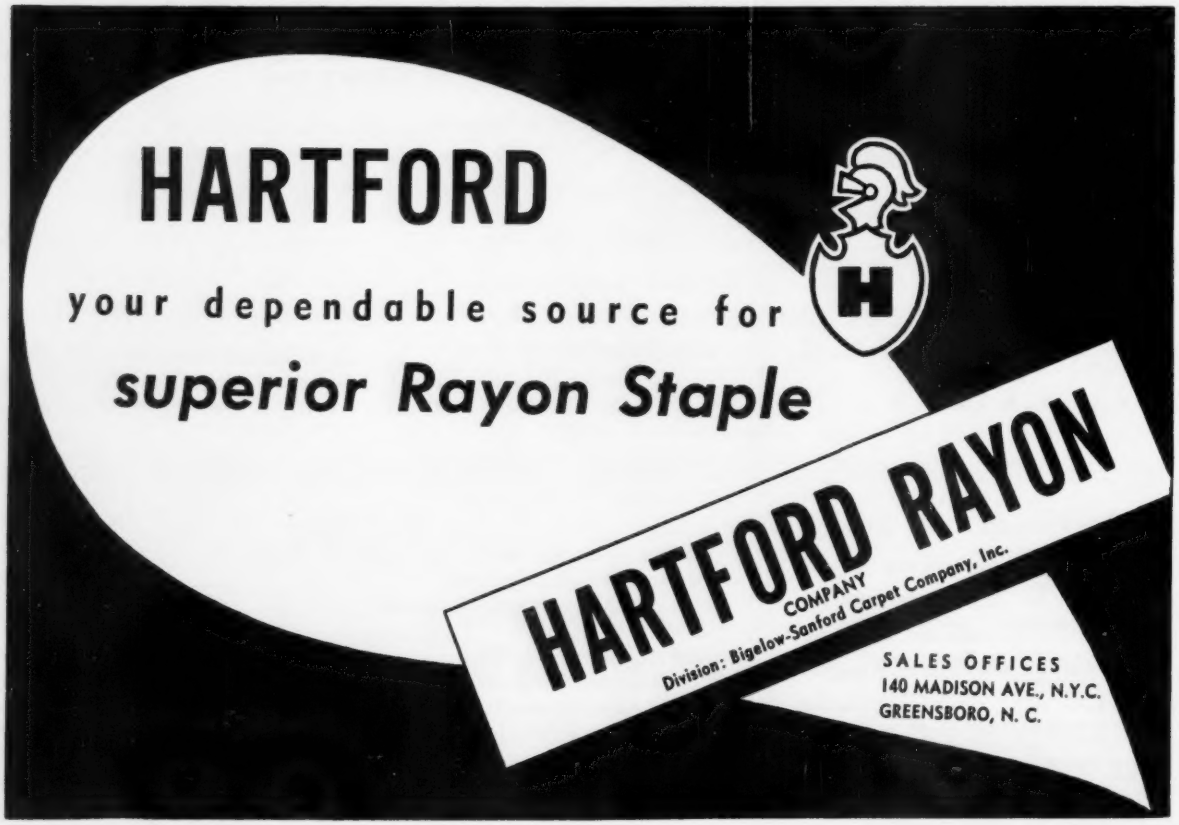
Los Angeles Seeks Mills

Plans to make Los Angeles a cotton textile mill center were given further impetus recently when it was announced that a survey of opportunities for establishment of a primary textile industry in the L. A. area will be initiated immediately. I. Bud Whiser, chairman of the Los Angeles Mayor's Committee for the Development of the Textile and Apparel Industry pointed out that California ranks third in the production of cotton in the U. S., producing some 1,571,000 bales in 1954. Whiser added that when you realize that the 11 western states consume approximately 10% of total output of cotton products it is easy to understand why mills in this area are necessary.

More Cotton for Italy

Signing of a cooperative agreement between the Cotton Council International and the Italian Cotton Institute will result in expanded programs to increase cotton consumption in Italy, according to Everett R. Cook, CCI president. The Italian program, one of four now being supervised abroad by CCI, is another where money is raised voluntarily for foreign private industry to match funds from sales of surplus U. S. agricultural commodities. The Italian organization will operate the program using sales promotion, public relations and market research techniques developed by the National Cotton Council in the U. S. A.

Other cotton news is the advocacy of a 5-point legislative program by Supima Association of America. The program is designed to prevent runaway prices on American grown extra long staple cotton by Government action, including release of American extra long staple cotton from the military stockpile as it is needed.



CHEMICAL PROGRESS WEEK-APRIL 8-12

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when better textiles are processed

The standard of the textile industry, Mathieson formaldehyde meets the strictest specifications for quality . . . quality which Mathieson maintains with unerring consistency through rigid production control.

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4901

Rayon Staple Prices Reduced

Reduction of three cents a pound in prices of regular rayon staple fiber from 32 cents to 29 cents were made effective March 1 by American Viscose Corp. Other special types were reduced as follows: crimped 3½ and 5 denier from 32 cents to 29 cents; crimped 8 and 15 denier from 33 cents to 31 cents; Super L (smooth) from 37 cents to 35 cents.

On March 5, Courtaulds (Ala.) Inc., reduced regular rayon staple two cents a pound bringing the price from 31 cents to 29 cents for bright and dull fiber.

On March 8, Hartford Rayon Co. reduced the price of its white crimped carpet rayon staple from 35 to 33 cents a pound. Hartford made no reductions in prices of its solution-dyed rayon carpet staple.

Textile Outlook Held Good

An optimistic note for the future of the domestic textile industry was sounded by F. E. Grier, American Cotton Manufacturers Institute president, before a recent session of the Textile Education and Machinery Day observance at Clemson, S. C. He based his optimistic outlook on: reduced capacity of plants due to scrapped spindles; current operation rate close to present capacity; upward population trend, and Government action designed to help the domestic industry face Japanese competition.

Silk Congress Oct. 21-26

Delegates from some 22 countries are expected to attend the Sixth International Silk Congress at the Waldorf-Astoria Hotel, New York City, on October 21-26. The American Branch of the International Silk association, which is sponsoring the congress, is acting as host.

Officers of the U. S. branch are: Paolino Gerli, Gerli & Co., chairman; George Elbogen, George Elbogen & Co., president; Philip A. Vogelman, Onondaga Silk Co., and Walter Strassburger, Walter Strassburger & Co., vice presidents, and George W. Gibson, William Skinner & Sons, treasurer.

New Wing for Textile Library

On March 1, ground was broken for a new wing of the Hesslein Library at Philadelphia Textile Institute in Philadelphia, Pa. Shown above, Richard S. Cox, dean emeritus of the college, takes a spadeful of snow and earth to get the work of construction under way. With Dr. Cox (left to right) are Bertrand W. Hayward, president of the college; George M. Ewing, architect; John P. Donovan, contractor, and Howard N. Smith of the Hesslein Foundation, donors of the original library.

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If Comfort Is Important in the Garment You Make . . .

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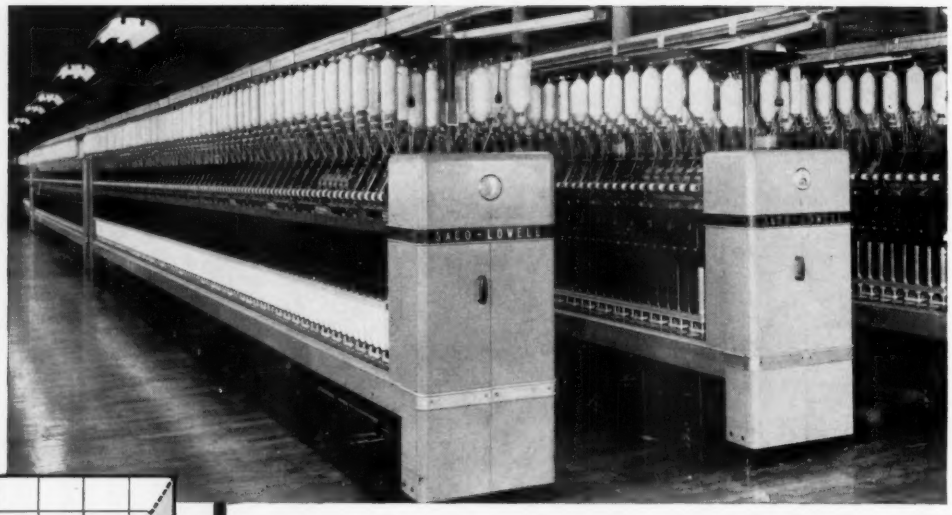

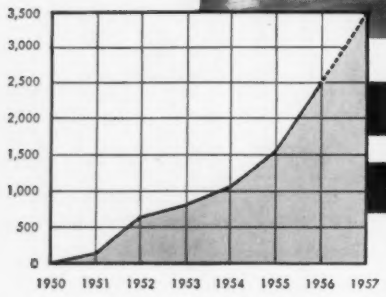

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by SACO-LOWELLIZING*

An important step in a Saco-Lowellizing program is the installation of Gwaltney Spinning Frames. The ever-increasing use of these modern frames is clearly indicated in the chart above — there are now over 600,000 spindles in operation.

***SACO-LOWELLIZE (Verb)**

(A) To utilize floor space so as to improve the flow of production.

(B) To co-ordinate the successive steps in processing.

(C) To reduce waste, spoilage, and unnecessary handling of stock.

(D) To realize the greatest economies in operating and maintenance costs.

The Gwaltney Room is the *Showplace* of any mill. It's attractive, clean, and modern — a joy to work in, to manage, or to own. There are fewer and happier operatives who produce more per man hour, *at lower costs* and *better profits.*

Profit from the experience gained by over 90 mills operating 600,000 Gwaltney spindles 'round the clock . . . spinning cotton, synthetic, worsted, and blend yarns . . . meeting the strictest standards of *quality, productivity,* and *economy.*

Join these modern mills. Produce your yarns with pride, satisfaction and assurance — with Gwaltney Spinning.

ASK YOUR NEAREST SACO-LOWELL OFFICE FOR A "FORECAST OF SAVINGS" BASED ON A SACO-LOWELLIZING PROGRAM.

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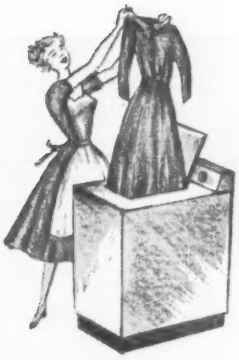

RESIPON® N C

– a modified urea-formaldehyde resin produces a soft, resilient hand on cotton and rayon fabrics, while adding these important "wash and wear" characteristics:

1 – exceptional crease and wrinkle resistance

2 – positive shrinkage control (at lower concentrations than conventional urea-formaldehyde resins)

3 – minimum amount of ironing required

4 – desirable hand for dress fabrics

HYDRO-PRUF®

– when used in conjunction with Resipon N C, the combination of silicone and resin brings wash and wear fabrics to new heights of quality and efficiency. Addition of Hydro-Pruf further improves your fabrics in these ways:

– by enriching the "hand" still further

– by speeding up the drying process (less water absorption)

– by increasing resistance to soil (fabric stays fresher longer)

– by improving tear strength

Finishers find that the compatibility of Hydro-Pruf and Resipon N C simplifies the production of the finest in "wash and wear", resembling the hand and appearance of combed cotton fabrics.

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NEWARK, NEW JERSEY

To manufacturers, converters, cutters, wholesalers and retailers:

LET'S GET THE FACTS STRAIGHT ABOUT MODERN RAYON

Many of the newer synthetic fibers which rocketed to fame in a flurry of claims, a few years ago, have recently suffered a good deal of debunking in trade and consumer circles.

This is hurtful to all of us in the apparel and home furnishings fields. It throws a smoke screen of doubt over the technical improvements and consumer benefits of *every* fiber—including rayon, the world's oldest, most used and *most improved* man-made fiber.

1957 Avisco rayon is not the rayon we all knew in 1945, in 1950—even in 1955. Intensified laboratory research has greatly improved it both in *structure* and in *use*.

It is stronger and vastly more versatile.

It can be kitten-soft in sterile surgical dressings or tiger-tough in tires beneath a truckload of crushed rock.

By itself, rayon can be silky, woolly, cottony or linen-like. In blends, it contributes its unique ability to take and hold gorgeous colors, absorb perspiration, and cut and drape and shape and stitch without seam slippage.

Improper *use* of rayon is swiftly disappearing. Remarkable new finishes, applied properly, add greatly to its superb washability, colorfastness, luster and comfort. The Avisco Integrity Program sets the standards for proper processing to meet end use requirements, and makes it worthwhile for everyone in the trade to observe these standards.

Many important cutters are adding the Avisco® Integrity Tag to apparel and home furnishings made from qualified fabrics. Many retailers find that this added assurance of quality rayon sells more goods and *keeps* them sold.

AMERICAN VISCOSE CORPORATION, 350 Fifth Ave., New York 1, N. Y.

Dayton ThoroCheck Straps

Last 25-50% longer. Here's why . . .

Instead of one wide strap, Dayton employs four separate ThoroCheck Straps to give you an exclusive *graduated braking* action that protects and lengthens the life of pickers, sticks, shuttle, and the check straps themselves. And, because *graduated braking* is smoother, there's no jar or vibration to wear and upset the adjustment of your looms.

Here's how it works. Impact of the shuttle drives the picker stick back into contact with the topmost of the four ThoroCheck Straps. The first strap cushions the initial shock—and allows the stick to make graduated contact with the second and, in turn, the third and fourth straps—until all are engaged. The result—smooth slowing of the stick to a cushiond stop.

No wonder mills report that Dayton ThoroCheck Straps last 25-50% longer. The exclusive *graduated braking* action plus the greater tensile strength built into the straps themselves are the reason. Dependable, economical and uniform in performance, Dayton Endless ThoroCheck Straps are unaffected by temperature and humidity—thus assuring you of fast Monday morning starts every time.

Call your local mill jobber to order Dayco Endless ThoroCheck Straps or write The Dayton Rubber Company, Textile Division, 401 S.C. National Bank Building, Greenville, S. C.

Dayton Rubber

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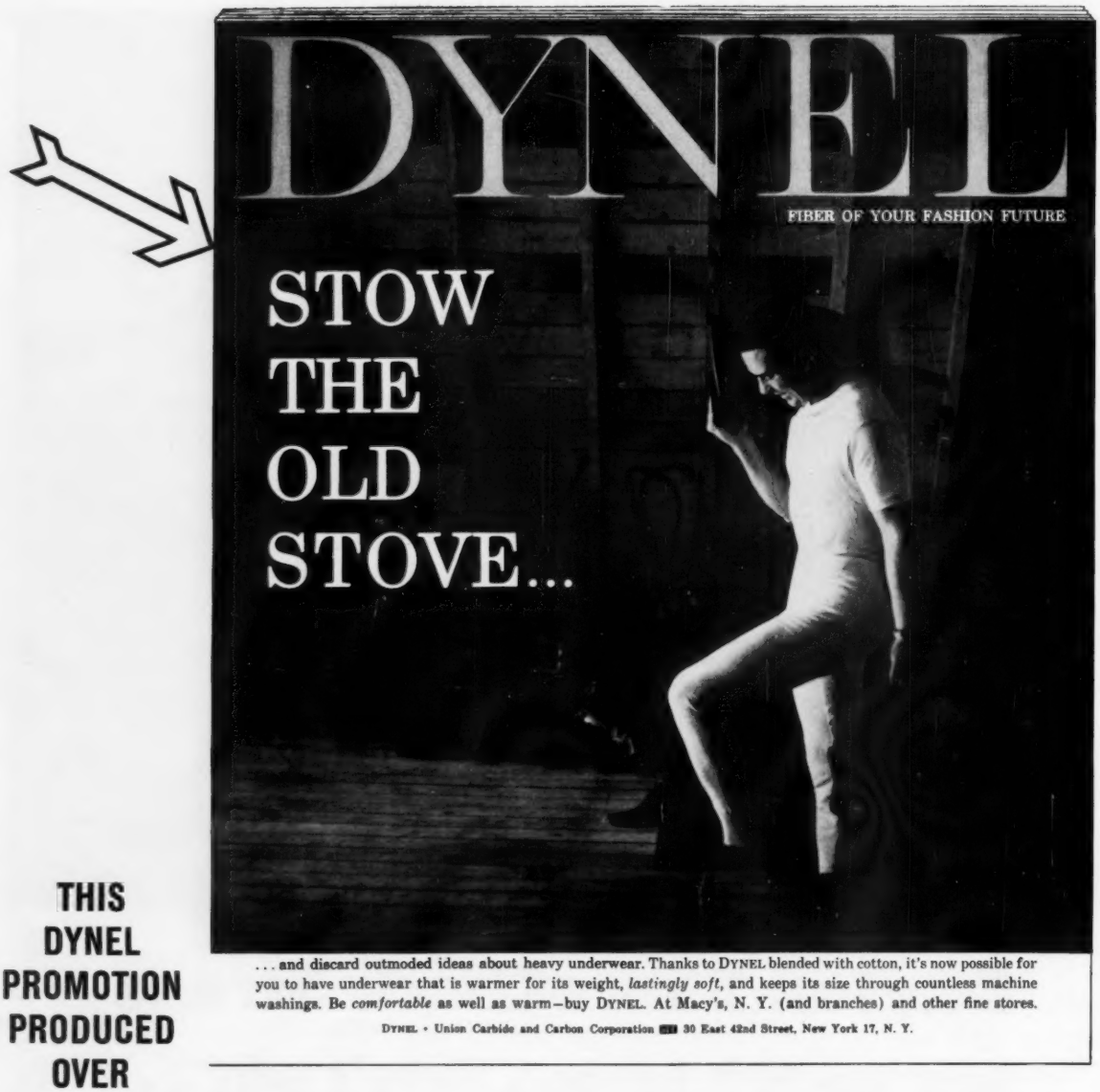

. . . and discard outmoded ideas about heavy underwear. Thanks to DYNEL blended with cotton, it's now possible for you to have underwear that is warmer for its weight, *lastingly soft*, and keeps its size through countless machine washings. Be *comfortable* as well as warm—buy DYNEL. At Macy's, N. Y. (and branches) and other fine stores.

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BOOTHS 59 & 60

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for news on latest machine developments

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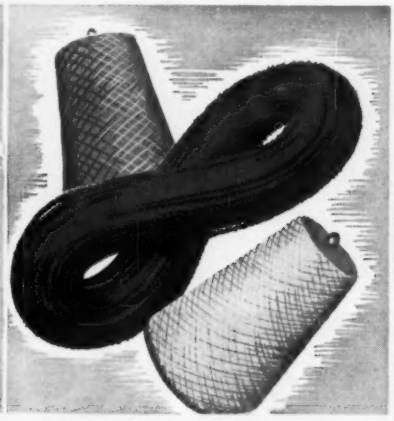
Sweaters of fabulous Turbo High-Bulk depend on the Turbo Stapler and Fiber Setter. Turbo High-Bulk is now produced by 50 leading spinners.

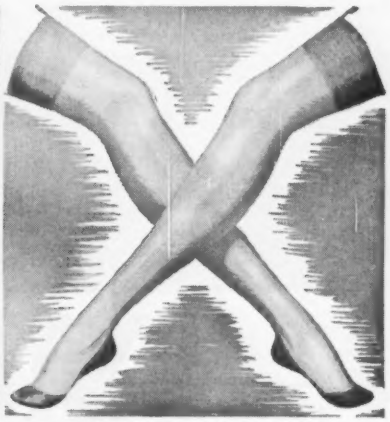
Fur-like high pile fabrics, like this acrylic-fiber stole, are beautifully finished with the Turbo Electro-Finisher, Wet Applicator, and Shearer.

Pile fabrics, like this alpaca and wool coat lining, have an entirely new look and hand after processing with the Turbo Electro-Finisher.

Anklets, socks and Bermudas are "set for life" on Turbo Machines. Single, double, and triple forms can be used interchangeably.



Synthetic yarns and fabrics are steam-set quickly and thoroughly in Turbo Machines. Automatic controls assure uniform, high quality results every time.



Conventional and stretch stockings are preboarded/finish boarded in a Turbo. For complete hosiery dyeing and finishing, use the Turbo Dyotherm.

Be sure to stop at Booths 59-60 for the latest on High-Bulk, High-Pile Fabrics and the precision, automatic, profitable setting of all synthetic fibers — news of the industry — and good fellowship.

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its

All New U.S. ACME TEXTURIZER

THE TEXTURED YARN MACHINE!

the first efficient production unit for "TASLAN" textured yarns!*

Watch for a big spurt in textured yarns . . . 60-spindle U. S. ACME TEXTURIZERS are now in production on "TASLAN"* textured yarns at DuPont licensees!

The new U. S. ACME TEXTURIZER introduces a whole new quality and profit approach to textured yarn production. It's designed for both the wet or dry process of texturizing twisted or untwisted filament yarns from cakes, cones, pirns, etc., to new, bigger, uniform headless packages—ready for quilling or warping!

In typical U. S. ACME tradition, this new machine provides positive yarn feed control, simplicity of threading, accurate tensioning—and more! Complete information is available . . . write or phone now.

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Let's talk over the new developments in the throwing field.

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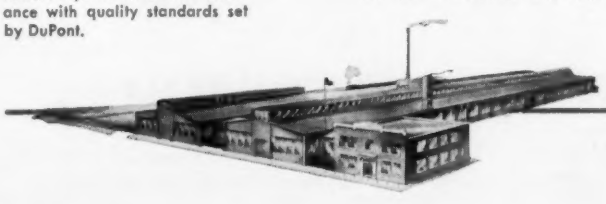
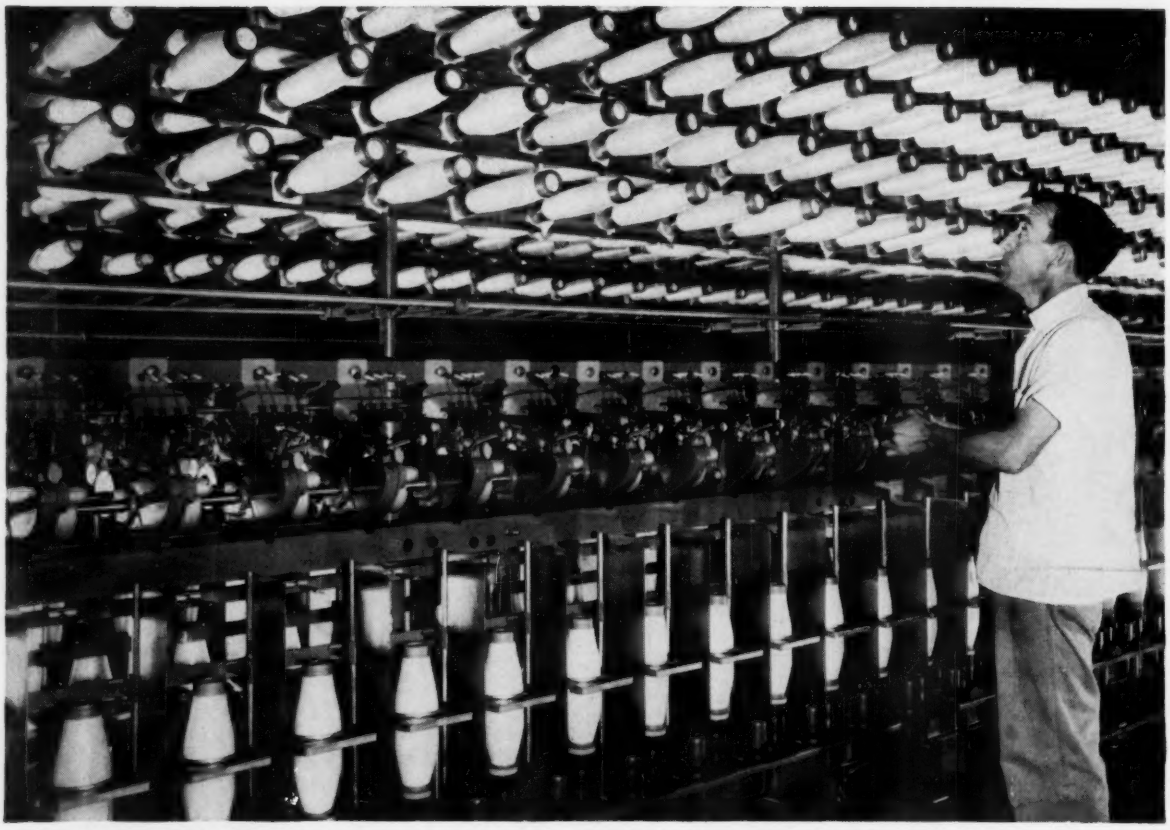


U. S. TEXTILE

designers and manufacturers of
U. S. ACME MODERN THROWING EQUIPMENT



Leesona Model 10 Ring Twisters processing glass yarn at the Seguin, Texas, plant of the Coast Manufacturing and Supply Company. The firm produces Trevarno Glass Fabrics.

Producers of TREVARNO GLASS FABRICS chose Leesona Model 10 Ring Twisters

Years of research and planning went into the decision of Coast Manufacturing and Supply Company to enter the textile industry as processors and weavers of glass cloth. The 85-year-old Livermore, California, firm, with a long history in the manufacturing and distribution of safety fuse for the mining and construction industries, made the carefully-planned move into textiles in 1947.

Ralph E. Merritt, president of the firm, reports:

"After evaluating other types of twisting equipment, Coast Manufacturing and Supply Company decided upon the Leesona Model 10 Ring Twister."

Model 10's are used exclusively in Coast Manufacturing's 800-spindle twister installation in Seguin, Texas, producing a double-tapered package which can be used directly for filling and warping operations without rewinding.

Versatile Leesona Model 10's can also produce a tapered top or straight wind package. They are ideal for processing not only glass yarn, but rayon, spun rayon, nylon, silk, wool, worsted, cotton and combination yarns, and the new bulk and stretch yarns as well.

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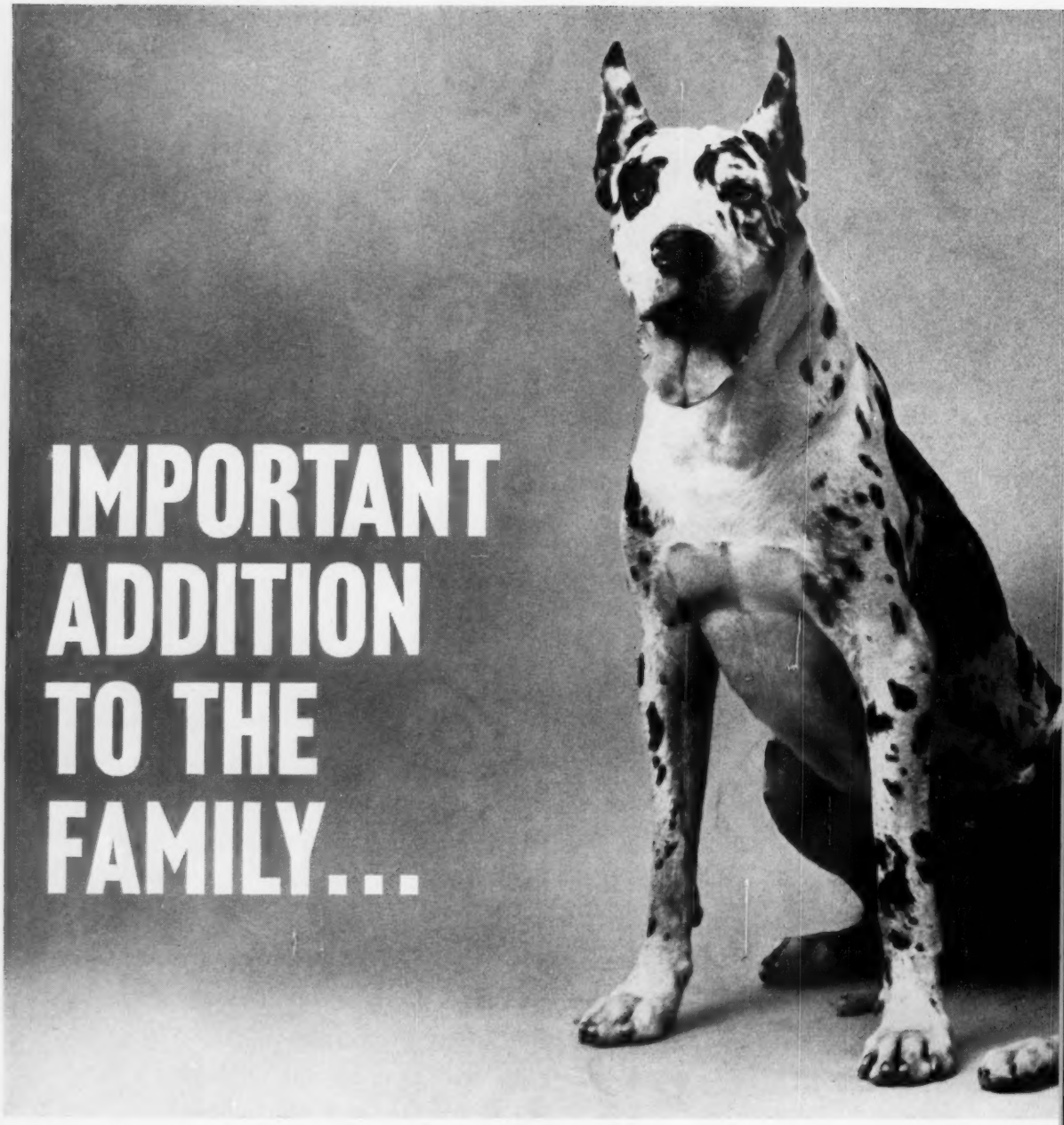

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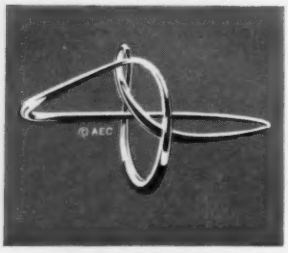

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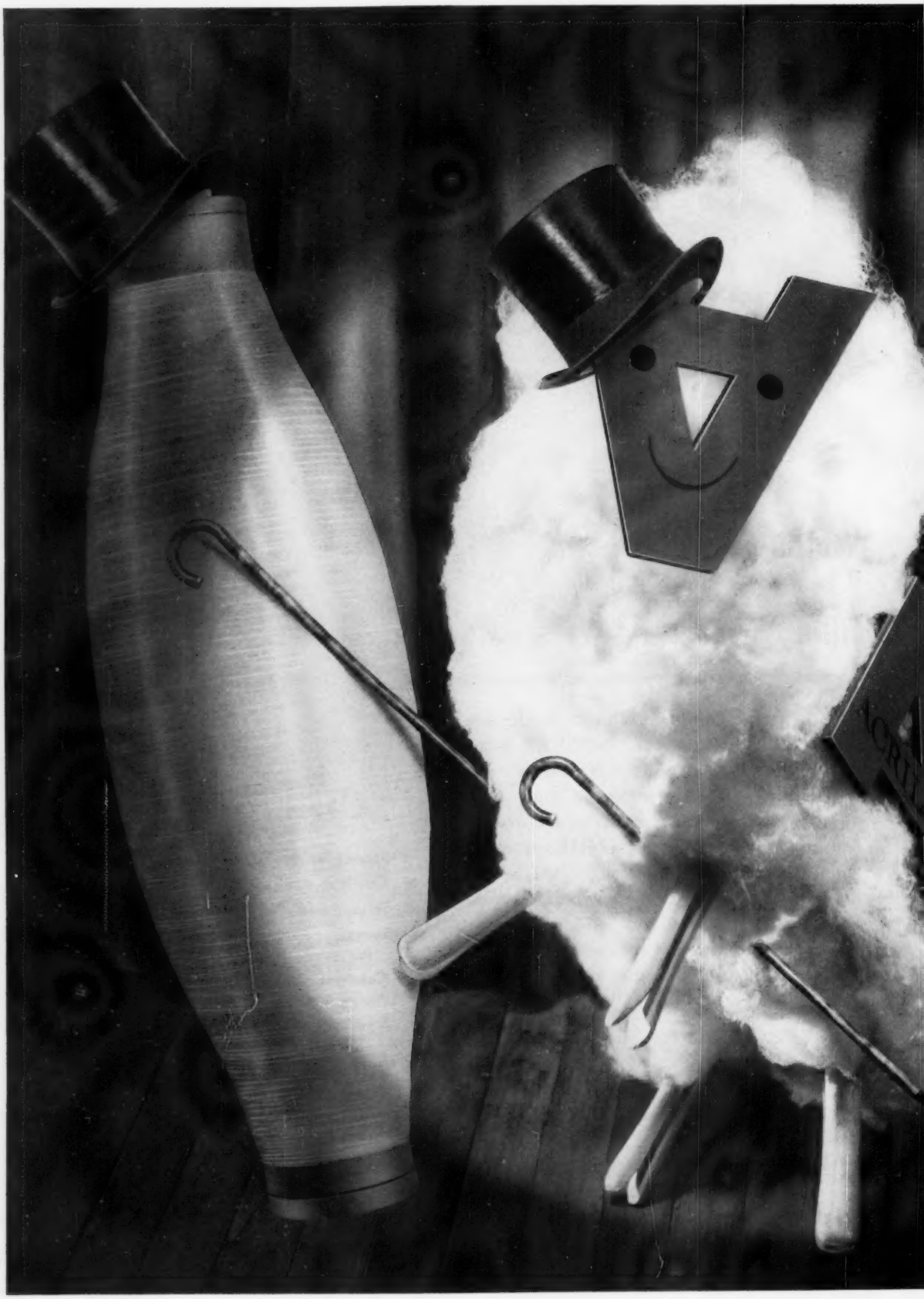

LOOK WHO'S IN THE QUALITY CONTROL ACT NOW

Acrilan has now moved into the spotlight enjoyed by Chemstrand nylon for unexcelled fiber quality and uniformity.

For nearly two years, the record of Acrilan acrylic fiber in mill after mill has earned it the top spot in smooth-running, efficient performance.

To achieve this record, Acrilan took an important leaf out of Chemstrand nylon's book on quality control. And in many ways, at Pensacola, Chemstrand nylon *did* write the book on new standards for man-made fibers.

Now, at Decatur, Alabama — where Acrilan is manufactured — this same concept is being applied. It embraces the most comprehensive specifications, the closest tolerances, the most exacting standards ever set up for producing a man-made fiber. This we call *Acrilan* quality control.

This control is in continuous operation at every single step of the entire manufacturing operation . . . *and beyond it* . . . to a complete pilot mill where Acrilan is test-processed 24 hours a day, 7 days a week, on machinery that duplicates the normal conditions of mill operation.

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- *A reduction in fly so significant it is raising yarn quality, reducing mill cleaning costs and waste.*
- *An improvement in high bulk processing that gives far greater assurance of fabric-shrinkage control.*
- *A dye merge uniformity now unchanged in over two years.*

Because of these advances (and they are by no means all), current production of Acrilan has reached and is maintaining a level of *uniform* quality hitherto considered impossible in the newer, man-made fibers.

Equally pertinent . . . under our concept of control, *each* new gain in Acrilan quality tightens the specifications that much more . . . promising further increases in your mill efficiency and production quality.

Yes, Chemstrand nylon is now sharing the spotlight for fiber performance with Acrilan. And the act is a smash-hit in every mill this fiber plays in!

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spring's sweatered look in
stays dream soft, dries i
SHIRT SWEATER
COLLARED CLASSIC
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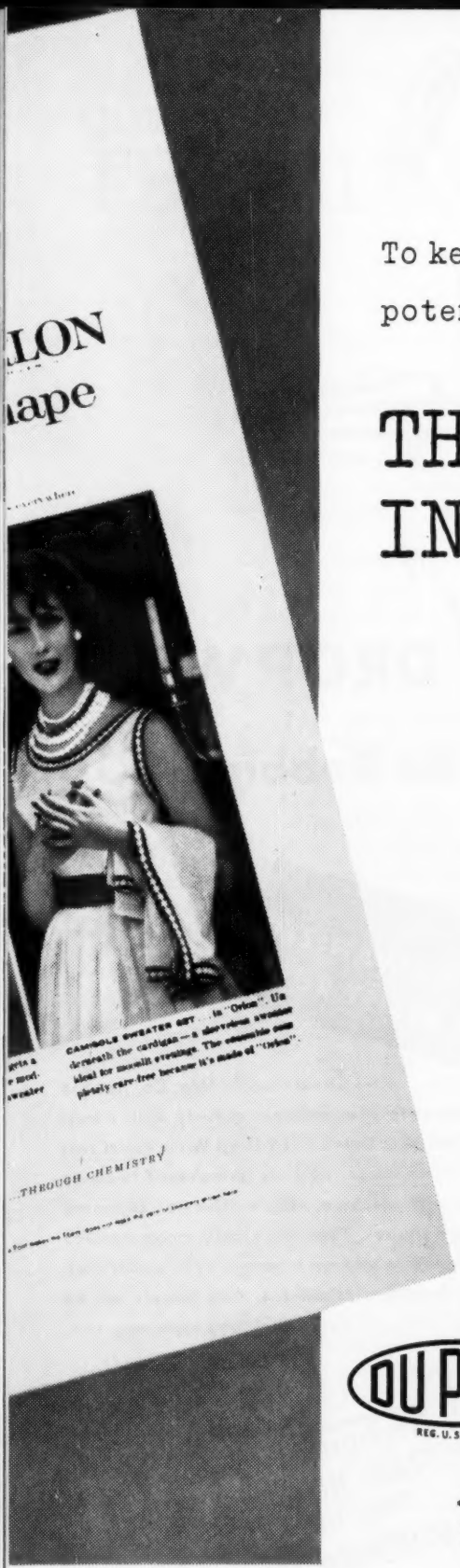
BETTER THINGS FOR BE


LON
ape
CAMISOLE SWEATER SET . . . in "Orlon". Us
ideal for moonlit evenings. The ensemble
pletely care-free because it's made of "Orlon".
THROUGH CHEMISTRY

To keep building sweaters as a Spring fashion potent Du Pont advertising will feature

THE SWEATERED LOOK IN ORLON

REG. U. S. PAT. OFF

Sweater department business all across the country will be stimulated by six four-color advertisements for sweaters of "Orlon"* acrylic fiber. These ads will run in LIFE, VOGUE, HARPER'S BAZAAR, MADEMOISELLE, featuring Du Pont's provocative selling theme, "SPRING'S SWEATERED LOOK IN 'ORLON' STAYS DREAM-SOFT, DRIES IN SHAPE."

Sweater customers will see new styles such as the shirt sweater, collared classic and camisole sweater set featured in the February 25 issue of LIFE and previewed here. In addition, they'll see the light-hearted colors of Spring in bulky knits, classic pullovers and cardigans brightened with embroidery and appliqués. And "Orlon" blesses them all with easy care . . . light weight . . . shape retention . . . luxurious softness.

For detailed information, contact Women's Wear Merchandising, E. I. du Pont de Nemours & Co. (Inc.), 350 Fifth Avenue, New York, N. Y. (LOngacre 3-6400).

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"Rusty" DROP WIRE!

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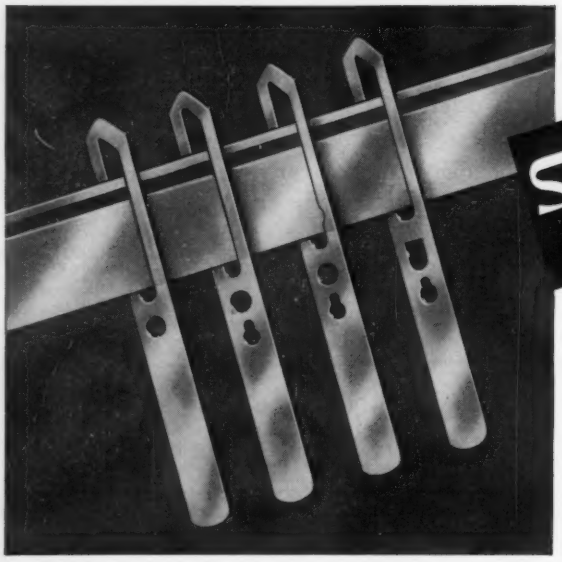

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MODERN
TEXTILES MAGAZINE

April 1957
Volume 38 Number 4

Publisher's Viewpoint

Our Textile Schools Deserve Our Help

The future of our textile technical schools is a matter of serious concern for thoughtful persons in our industry. These schools in recent years have been faced by many distressing problems. One of the most urgent of these is the problem of finding new students. At a time when virtually all colleges and technical schools are turning away high school graduates, textile technical school enrollments are declining.

The deans and faculty members of our textile schools, as well as their boards of trustees, have given long and careful thought to ways of solving the problems of specialized textile education. They are fully aware of the predicament of their institutions and they are working hard to find workable solutions. As a long step in this direction, they have arranged recently for an independent organization to conduct a survey of textile school graduates and textile employers to learn what they think about textile technical schools and how they can be improved.

The survey will be in the form of three separate questionnaires. One will be sent to the graduates of various textile schools. The second will go to the schools themselves. The third will be sent to companies in the textile industry. From the graduates, the survey will seek to learn where they end up after leaving textile schools; what they think about their textile college training after they have been out in the industry for a few years; and in what ways they think textile education can be improved. From textile firms the survey will seek information on how many textile school graduates enter their employ and later leave for other industries; and how textile firms rate the desirability of textile training as compared with more general engineering education.

These questions are only a small part of the information that will be sought by the survey. The total effect of this comprehensive survey when it is finished should be to reveal, for the first time, accurate information shedding light on the functions and value of the textile schools in a changing world. Once this information is accumulated and analyzed, the officials of our textile schools will be in a position to make sound decisions about their future course—decisions based on an understanding of their true position in the overall textile industry picture. The result cannot fail to be beneficial.

It is hoped that every one in the industry to whom one of the questionnaires is submitted will take the time to answer it carefully and accurately. By doing so, all of us can make a valuable contribution to the vitally needed understanding of the new directions our textile schools must follow.

In the past, our textile schools have made a tremendous contribution to the progress and growth of our great textile industry. It is unthinkable that the schools have now outlived their usefulness. Rather, in view of the tremendous opportunities opening for textiles with the growing use of man-made fibers, our textile schools should have ahead of them yet greater opportunities to serve the industry. Once the information obtained by the current survey is available, our industry noting the direction pointed by this data, must unite in a determination to give our textile schools even greater support than in the past, and help them in the recruitment of new students. For without the aid of our textile schools, our industry would indeed be crippled.

A. H. McCullough

PUBLISHER

OUTLOOK IN TEXTILE MARKETING

By ROBERT C. SHOOK, Textile Economist

Current slack demand for fabrics may yield soon to brisk wave of fresh buying set off by retailers

Present mill curtailment does not reflect an unfavorable level of retail sales. It does, however, reflect a distortion in the pattern of retailers' buying, and failure on the part of mills to anticipate this development.

Last year, the new Minimum Wage Law went into effect at the end of March. In anticipation of that development there was a substantial buying movement centered on textile staples. Although the increase in inventory reflected by this buying movement has now been liquidated, the excess which existed last spring had a psychological effect.

Sales last spring were also handicapped by adverse weather following an early Easter. Retailers, therefore approached the fall, 1956 season with a great deal of caution.

Sales Picked Up in Autumn—Apparel sales during late August, September and early October, however, were quite favorable. After a slow start, retailers became more optimistic, and bought more rationally, but again encountered unseasonable weather in late October and November. Consequently, there was quite a bit of heavy outerwear which had to be liquidated at reduced prices.

Taking account of price reductions and volume of sales in January, it seems likely that the volume of sales to consumers, on a yardage basis, exceeded a year ago. Total retail textile and apparel sales in February also showed a favorable pattern, probably increasing between 4% and 5% on dollar basis. Nevertheless retailers' conservative buying policies were continued.

Influence of Late Easter—Part of this conservatism, undoubtedly reflects the later date of Easter this year (April 21) and the tendency of retailers to emphasize late spring and summer apparel at the expense of pre-Easter spring apparel.

There is no doubt that tight money has also had some influence, on the way down the line from retailer to cutter to converter.

Another factor which has had an indirect influence is indicated by the curtailment in many types of appliance production. Here too inventories have become temporarily excessive. And in most stores an excess of inventory in one or two departments will lead to a conservative buying policy covering all departments. But generally speaking, inventories at intermediate levels seem to be small. Cutters had not speculated and, judging from reports from retailers who have tried to work out special programs, the mills' supply of finished goods is also comparatively small.

Buying Wave May Come Soon—A view was expressed last fall that inventory liquidation during the declining phase of the last textile cycle had not been as complete as in some other cycles. The present extent of mill curtailment, however, suggests that the industry, as a whole, is approaching a very liquid position, so far as inventory is concerned. All evidence available seems to justify these conclusions:

a.) The trend of consumer demand at the retail level will shortly begin to reflect itself in a flow of new orders all down the line, from retailer to cutter to fabric distributor.

b.) Retailers, because of their conservative buying, will be more than usually hard pressed to meet seasonal needs this spring and summer.

Why Informative Labels Are Needed—At a recent conference of apparel educators, the manager of Sears' Textiles Testing Laboratories, pointed out:

"With all the man-made fibers now used in fabrics, it would be impossible for even an expert to look at a fabric, feel it, and judge its value for a particular purpose. If an expert cannot do it, what about an average customer? So we must have labels giving the important properties of the fabric to enable the customer to choose wisely."

(Continued on Page 95)

Vice president and research director, A. W. Zelomek Associates, Inc., 350 Fifth Ave., New York City.

THE PRINCE AND THE PRESIDENT—John E. Bassill (right) president of American Enka, greets Prince Bernhard of the Netherlands when the prince came to Asheville, N. C. to participate in the opening of Enka's new rayon staple plant at Lowland, Tenn. A.K.U., American Enka's European affiliate, is based in the Netherlands

In his time, John Bassill has served as president of four rayon producers with rare ability and still rarer integrity of character

The rayon industry's "MR. PRESIDENT"

By Jerome Campbell
EDITOR, MODERN TEXTILES MAGAZINE

IN THE EARLY MONTHS OF 1932, the rayon producing business was not good, and for one company, Tubize, it was bad enough to cause the directors deep worry. Tubize had lost $5¼ million during 1930 and 1931 on yearly sales of less than $9 million. And added to the directors' worries was the problem of finding a new president to replace Benjamin G. Slaughter who had resigned.

With working capital down to $800,000 and the possibility of insolvency in their minds, the directors were convinced that only an outstanding man would do for the job of president. They were determined to settle for nothing less. Only a man of tremendous executive abilities and wide business experience would be able to pull Tubize out of its slump, the directors told each other earnestly, and get it back on the road to profitable operation. They started to look widely for such a man, for most of them felt that he would have to come from outside the rayon industry.

It happened, however, that the chairman of the executive committee, Rufus Scott, a hosiery manufacturer and one of the few directors with textile experience, had a different opinion. "The man you need for president," he told his fellow directors, " is right here working for you now. His name is John E. Bassill and he is your vice president in charge of sales."

Many of the directors were overwhelmed by the audacity of Scott's suggestion: the idea of making one of their own employees president of Tubize appeared to stun them. "We can't make John Bassill president," one director, a prominent banker, told Scott. "Why he started here as office boy."

Very reasonably, Scott pointed out that Bassill's lowly beginning with the company 12 years earlier had not prevented the directors from making him a vice president. He made other persuasive arguments in favor of Bassill for president: Scott stressed Bassill's demonstrated ability for hard work, his single-minded devotion to the company's interests. Scott pointed out to his fellow directors that Bassill had an impressive grasp of the techniques of rayon manufacturing and marketing; he reminded them that Bassill, in his 12 years with Tubize had acquired from work and night school study a deep understanding of corporate organization and finance.

In time, Scott won over his fellow directors. John Bassill, a quiet, soft-spoken man of great personal modesty, was appointed president of the company he

ONE STEP IN RAYON MAKING—Rayon filament yarns are pot-spun at American Enka's plants at Enka, N. C. and Lowland, Tenn.

had joined in 1920 as a young clerk fresh from wartime service in the Marine Corps.

Bassill showed before long that the directors had chosen wisely. Within two years, Tubize losses were checked and the company showed a profit. By 1936, on sales of less than $10 million, net profits were more than $1 million. In 1945, the year prior to Tubize's merger with Celanese Corp. of America, sales were more than $17 million and dividends more than $1 million.

In the 14 years during which Bassill headed Tubize the company had grown in other ways. It had replaced its original nitrocellulose method for making rayon by acquiring, through merger, the more modern plant of another rayon producer, American Chatillon Corp. Under Bassill's guidance, Tubize had also moved into the manufacture of acetate and it had expanded as a producer of knitted and woven fabrics.

The president who had steered Tubize on its forward course of growth and profitable operation had been brought up in Norristown, Pa. After graduating from St. Patrick's parochial school, he had found his first job as a mule spinner in a woolen yarn mill. After hours he found time to take courses in the Schissler College of Business in Norristown.

During World War I he served in the Marine Corps. When Bassill came out of the Marines in 1919, he was 23 years old, and eager to resume the work of building a career for himself. He applied for a job at the office of a brand new company which united Belgian technical skill and American capital to manufacture "artificial silk." The demand for "artificial silk", as rayon was then called, was extremely clamorous. Old timers will remember that 1920 was the year rayon yarn reached its all-time high of $6 a pound (it fell to $2.50 before the year was ended.) The backers of Tubize Artificial Silk Co., as the new venture was named, were hopeful of substantial profits to be obtained from the sale of yarn made at their new plant in Hopewell, Va., where the outmoded and inferior nitrocellulose process was used.

Gordon A. Hardwick, a young Wall Streeter who had been sent down to Philadelphia by Dillon, Read & Co. to be a vice president of Tubize, was favorably impressed by the eager and alert ex-marine who wanted a job. He hired Bassill as a clerk in the accounting department, advising him that it would be a good idea for him to enroll in night school and study bookkeeping and other useful commercial subjects.

The advice was entirely acceptable to Bassill who in fact had already decided that he was in need of more formal education. In the Marine Corps Bassill had seen something of the world and the men who run it; he had concluded that his strong ambition to get ahead and amount to something would need the support of more training than he had received in the Schissler College of Business. He enrolled in the Wharton School of Finance at the University of Pennsylvania in West Philadelphia. His studies of business, finance and accounting at Wharton, he says now, first awakened his lifelong strong interest in the problems and techniques of corporate management.

The 1920's were years of rapid growth, expanding markets and rich profits for rayon producers. Tubize shared in this growth and prosperity, and its expansion created opportunities for John Bassill to show his abilities and win rewards for his strong ambition. Within a few years, he was assistant treasurer of the corporation. In 1929 he became a vice president.

Rufus Scott, as one of the founders and a director of Tubize, knew John Bassill well in those days and was impressed by his abilities. "John Bassill as a young man revealed a great capacity for growth coupled with remarkable ability and an enormous capacity for hard work," Scott recalls. "He informed himself thoroughly on every aspect of Tubize's business of making and selling rayon. He studied the industry and the methods it used to produce fiber. He read everything available on rayon and its manufacture. In time he became possessed of the best all-around knowledge of the rayon business of any man I have ever known. But with all his ability and knowledge he remained modest, self-effacing."

Bassill Changes Jobs

The abilities that Bassill showed as a young executive matured impressively in the years that followed his appointment as president of Tubize. It was a telling measure of his stature in the rayon industry that when Tubize was absorbed by Celanese in 1946, Bassill went into Celanese as a vice president, a member of Celanese's executive committee and a member of its board of directors. Early in 1947, he resigned from Celanese to become president of American Bemberg and its affiliated company, North American Rayon. A major portion of the stock of these companies was in German hands which led to seizure in August, 1947 by the U. S. Office of Alien Property.

As president, Bassill had to steer the companies through a sea of complicated and difficult problems. Among these were the attempts of the Federal Government to use its position as holder of a controlling interest in Bemberg and North American to push their prices for rayon yarns below the market in an effort to force other producers to lower their prices. Bassill, strongly supported by the Board of Directors, resisted this pressure, which he felt was unfair to the many stockholders who were American citizens.

When the Federal Government in December, 1948 sold the companies to Beaunit Mills as the highest of four bidders, Bassill resigned as president. In giving up his job, he declared that he had fulfilled his obligation to the minority stockholders "during the period of government ownership and to our customers

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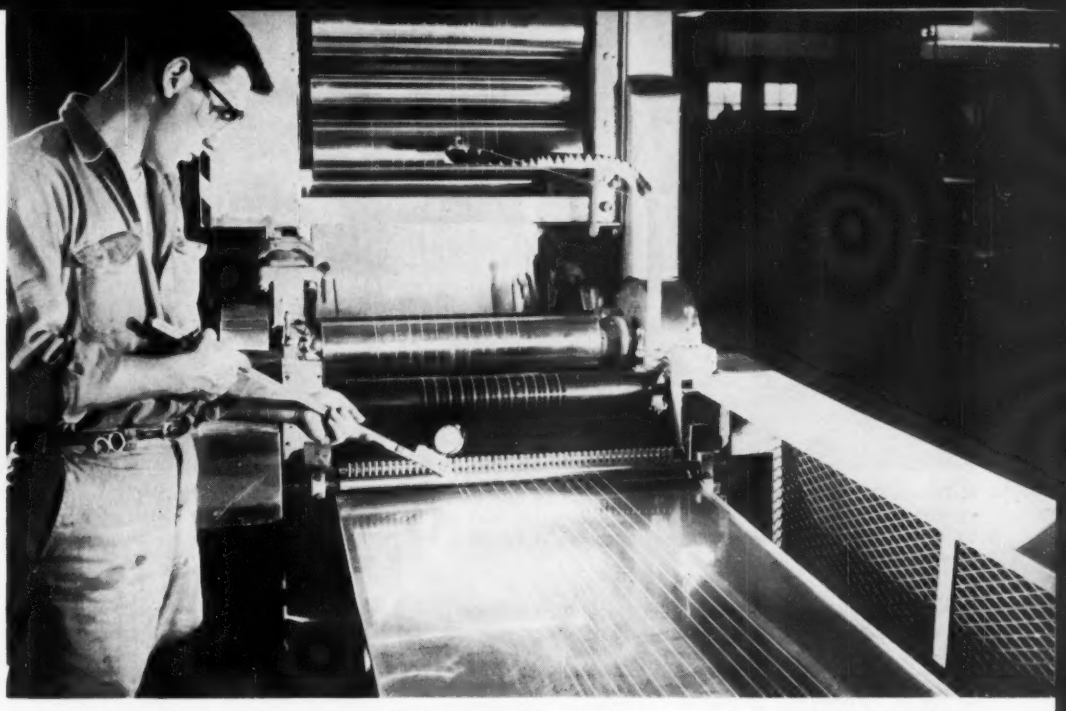


This operator is testing cord tension in nylon tire cord hot stretching unit installed in Du Pont's new laboratory

New industrial fabrics laboratory

STAFF PREPARED

DU PONT has acquired a sharp and sturdy new spade to dig for new markets for its fibers in industrial end uses. For the first time since it began operations in 1954, the industrial products research laboratory of the Du Pont Co. was inspected by the press in February. The tour of the new laboratory located in Newport, Del., near Du Pont headquarters in Wilmington, was preceded by a series of talks by Du Pont engineers on various phases of work done at the laboratory.

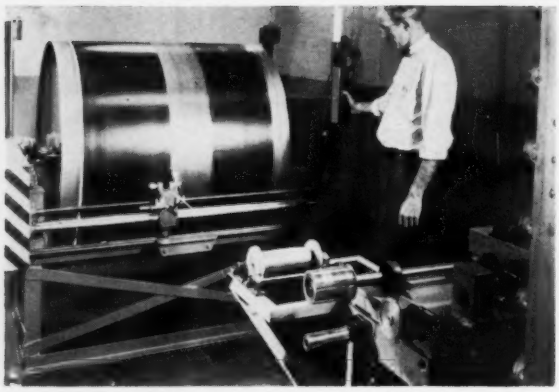
The laboratory's basic function, according to the speakers, is to provide a sound technical base for diversification and improvement of industrial uses of cellulosic and the newer synthetic fibers. Included in the laboratory's equipment, along with physical testing facilities, is an operating area where key steps in the manufacture of industrial products can be duplicated.

This equipment is used in exploring ways Du Pont fibers can be used in such industrial applications as tire cord, plastics reinforcement, nonwoven fabrics and felts, papers, bearings, coated protective coverings, filling materials and mechanical rubber goods.

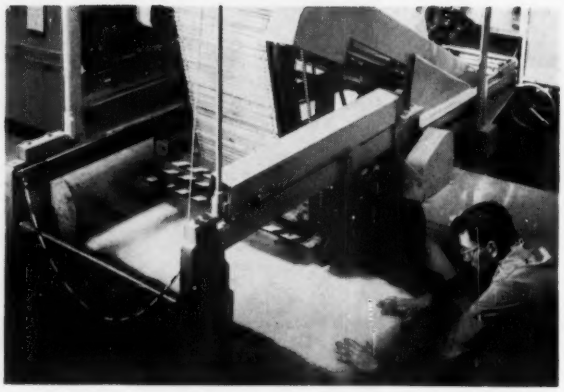
To carry out its function, the laboratory has 160 employees of whom 40 are technical experts. The remainder are technicians, operators, clerical aides and service workers. Two-shift operation is maintained at the laboratory for a total of 16 hours daily, five days a week. The building housing the laboratory has 40,000 square feet of floor space and was built at a cost of $2 million.

An important section of the laboratory's activities is work on nylon tire cord. In this work, determination of the most effective technology for tire making requires frequent duplication of the phases of tire production. In this effort, as many as 45 tires a week are made in the laboratory. All these tires are used exclusively for testing and analysis. Among the tire building machinery in the laboratory is a dip-stretch

STUDYING AN IMPORTANT PAPER—This technician is drying an experimental sheet of paper made with synthetic fibers by passing it over a heated drum. Development of man-made fiber papers is an important part of the work at Du Pont's new laboratory



A TIRING OPERATION—This laboratory technique of building ply of cord fabric from a single bobbin permits construction with any given number of cords per inch for precise studies of role of new experimental yarns



TWO LAPS BETTER THAN ONE—At DuPont's laboratory a carded web is laid up on itself by this cross lapper to form batt of any desired thickness and density for nonwoven fabrics, felts, and similar end uses

unit which can process one to 64 cords at one time in a laboratory-scale replica of the big units in commercial plants. With this unit, researchers can vary conditions widely to determine effect on cord or develop improved processes. Chemical compounds which promote adhesion on rubber can also be studied.

Special production equipment in other areas of the laboratory includes a miniature paper-making machine which produces a six-inch strip of paper in any desired length in duplication of manufacturing process of a paper mill.

For production of non-woven felts, the laboratory has a needle-punching machine which can process batts up to 132 inches wide, bonding them mechanically by action of 8,400 barbed needles. Reinforced plastics studies are performed on a laminating press with a capacity of 300 tons pressure.

The industrial products research laboratory is part of Du Pont's textile and industrial products research division of which Dr. Russell W. Peterson is research director. Dr. Richard W. Nebel is director of the laboratory. Dr. John M. Swanson is research manager for tire cord and mechanical rubber goods.

Ends-down and loom-stop testing

Here is a new method which is better and saves time

by Norbert Lloyd Enrick*
INSTITUTE OF TEXTILE TECHNOLOGY

CONVENTIONAL ends-down and loom-stop testing requires a fixed time period of observations, during which the actual breaks or stops are recorded. A better, time-saving method which is just as reliable, is shown by the Table at right. Using this Table, no fixed testing time is required. Instead, the observations may be ended as soon as the total number of breaks or stops observed is adequate for the desired reliability.

The Table provides for the various practical conditions that may be encountered in a spinning or weaving mill. An example, shown along the bottom of the Table, illustrates a typical use. Usually, this Table will save from 25 to 35% of testing time, with no loss in reliability, as against the older fixed-time-period method of ends-down and loom-stop testing.

The statistical formulas used in preparing this convenient Table were previously shown in this Magazine in the series on "Quality Control through Statistical Methods," now available in bound form through this Magazine.

* From a paper presented before the Southern Textile Methods and Standards Association, at Clemson, S. C. March 1956.

ALLOWABLE SAMPLING ERROR, %E	SAMPLING RISK, %				
	0.1	0.3	1.0	5.0	10.0
	ENDS-DOWN OR STOPS TO BE OBSERVED				
0.5	384,400	360,000	270,400	160,000	102,400
1.0	96,100	90,000	67,600	40,000	25,600
1.5	42,711	40,000	30,044	17,778	11,378
2.0	24,025	22,500	16,900	10,000	6,400
2.5	15,376	14,400	10,816	6,400	4,096
3.0	10,678	10,000	7,511	4,444	2,844
4.0	6,006	5,625	4,225	2,500	1,600
5.0	3,844	3,600	2,704	1,600	1,024
6.0	2,669	2,500	1,878	1,111	711
8.0	1,502	1,406	1,056	625	400
10.0	961	900	676	400	256
12.0	667	625	469	278	178
15.0	427	400	300	178	114
18.0	297	278	209	123	79
20.0	240	225	169	100	64
25.0	154	144	108	64	41
30.0	107	100	75	44	28

Example: For spinning ends-down, the %E is 10, sampling risk is 5%. To find number of ends-down to be observed, enter Table at 10% level. Proceed horizontally until column for sampling risk of 5 is reached. This yields 400 as the number of ends-down to observe.

FEATURING ALL SEVEN

"TERGITOL" NONIONIC SURFACTANTS

Trade-Mark

NONIONIC NPX

versatile detergent,
wetting agent, and emulsifier

NONIONIC NP-14

oil-soluble emulsifier
and detergent

Nonionic NP-27

aromatic-soluble emulsifier
and wetting agent

Nonionic NP-35

water-soluble emulsifier and wetting agent
in presence of dissolved salts

NONIONIC TMN

wetting agent and penetrant
with good rewetting properties

NONIONIC NP-40

water-soluble emulsifier and
wetting agent above 100°C.

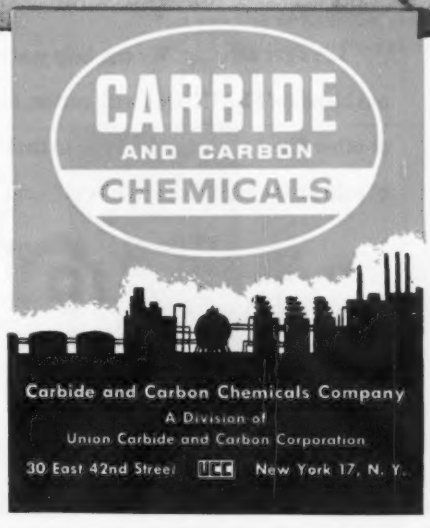
Nonionic XD

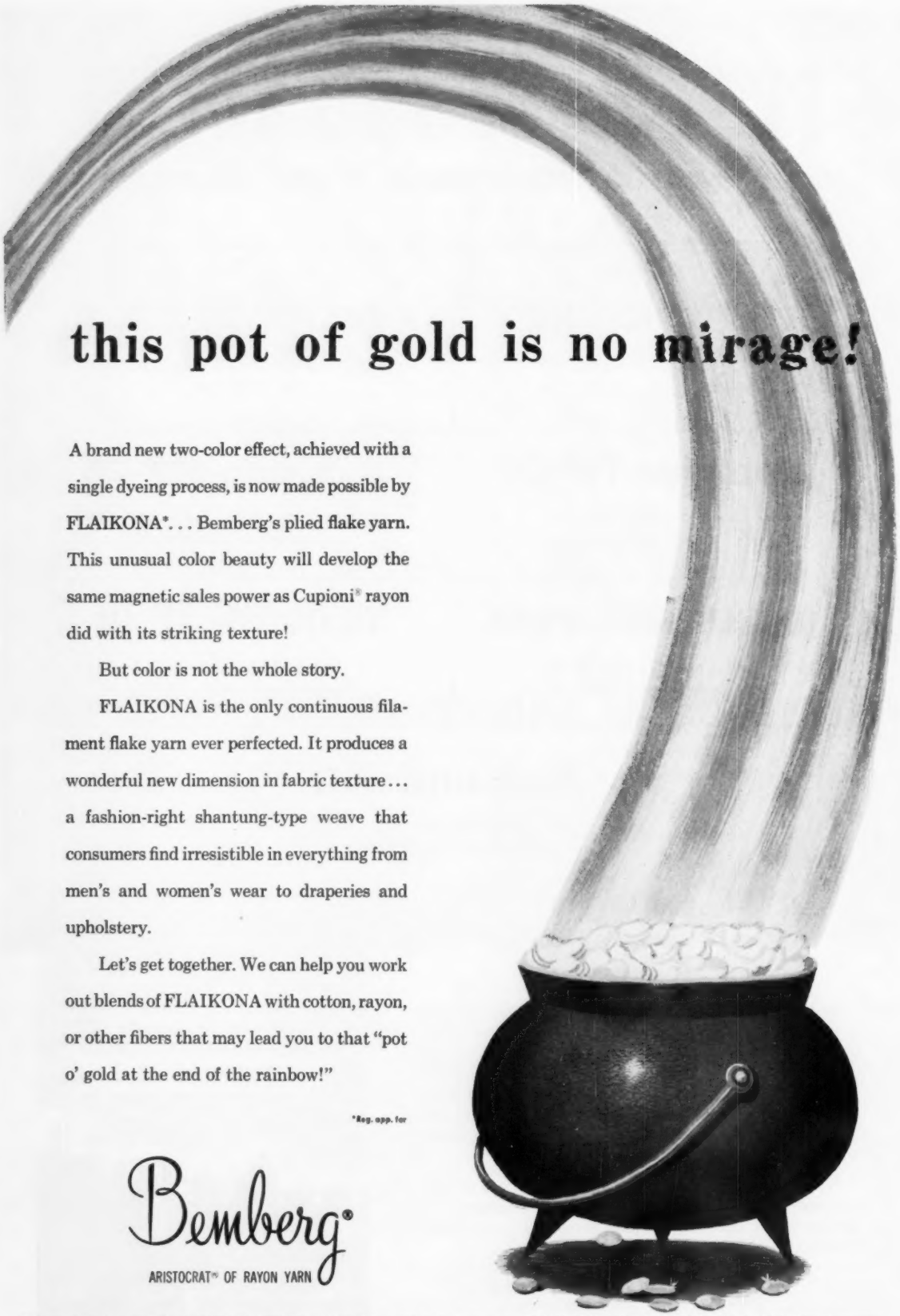
outstanding emulsifier
and low-foaming detergent

Here's a cast that gets top billing in the many different types of surface activity, thanks to the specialized talents of the individual performers. Because no one surfactant can play all parts equally well, CARBIDE has developed a large group of TERGITOL nonionics. Each one is carefully designed for maximum efficiency under specific conditions of performance. That's why —whether it's wetting, detergent, emulsifying, or dispersing action—a TERGITOL nonionic will fill the bill.

For more details on these outstanding products, call or write our nearest office for samples and further information. In Canada: Carbide Chemicals Company, Division of Union Carbide Canada Limited, Montreal and Toronto.

The term "Tergitol" is a registered trade-mark of Union Carbide and Carbon Corporation.





this pot of gold is no mirage!

A brand new two-color effect, achieved with a single dyeing process, is now made possible by FLAIKONA*. . . Bemberg's plied flake yarn. This unusual color beauty will develop the same magnetic sales power as Cupioni® rayon did with its striking texture!

But color is not the whole story.

FLAIKONA is the only continuous filament flake yarn ever perfected. It produces a wonderful new dimension in fabric texture . . . a fashion-right shantung-type weave that consumers find irresistible in everything from men's and women's wear to draperies and upholstery.

Let's get together. We can help you work out blends of FLAIKONA with cotton, rayon, or other fibers that may lead you to that "pot o' gold at the end of the rainbow!"

*Reg. app. for

Bemberg®

ARISTOCRAT™ OF RAYON YARN

Flaikona rayon is a product of: AMERICAN BEMBERG • Main Office: 261 Fifth Avenue, New York 16, N. Y., LExington 2-3520 • Plant: Elizabethton, Tennessee.

USG-2
Winder Guide

TBS-7
Acme Face Guide

TBM-4
Spooler

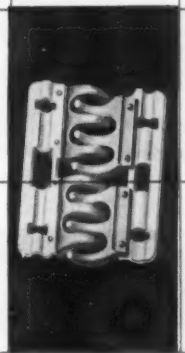
The Industrial Ceramic of Gem Hardness

Heanium

Q240-2
Drop-Wire Guide

Test samples of Heanium stock guides will be furnished without charge.

TW-1
Tension Disc



T3-F
Fingers

TM-2
Mushroom Stud

VISIT OUR BOOTH #19

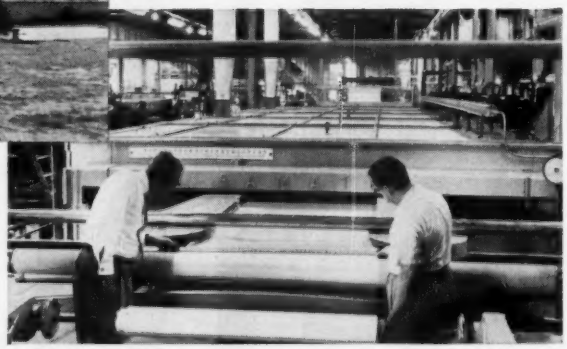
HEANY INDUSTRIAL CERAMIC CORP.

New Haven, Connecticut

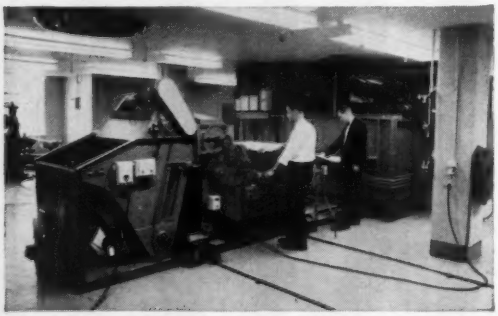
University 5-5243

Celanese dedicates a great ... and affirms

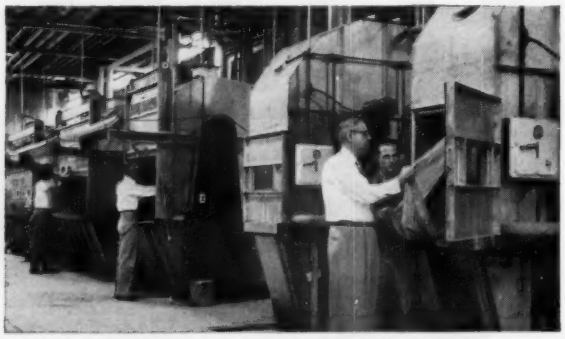
Headquarters of the Celanese Development Center at Charlotte, North Carolina.



A Famatex Tenter frame for both knit and woven goods, finishes fabrics to final widths of 24″ to 120″.



For development of non-wovens, Celanese uses Curalator Rando-webber in line with spray booth and infra-red drying unit.



Dyeing and finishing laboratories employ dye becks capable of handling full production runs.

Eight can slasher works in conjunction with high speed beamers and modern looms.

Celanese

new textile development center a marketing philosophy

Celanese is convinced that developing and promoting its fibers in relation to the needs of the industry is a practical, profitable and constructive marketing philosophy. It offers stimulus and stability to us—and to you.

That is why—on January 30th—Celanese unveiled at Charlotte, North Carolina, the Celanese Development Center—largest and most advanced development operation in existence.

Its outlook is industry wide. Its aim is to expand markets by creating new end uses for—and new methods of working with the Celanese family of fibers. Celanese welcomes inquiries and suggestions that fit in with its larger scope —that of over-all industry improvement.

Presided over by seasoned textile scientists and experienced production personnel—averaging over 20 years mill experience—all work is evaluated in *production* quantities. It stands in contrast to the industry's traditional trial and error pilot operations—offering you fiber, fabric and process data with most of the "bugs" removed.

In 160,000 square feet, using the industry's most modern equipment, Celanese scientists are now developing new end uses for fibers, as well as improved textile processing, dyeing and finishing techniques. And their findings are passed on to all segments of the textile industry.

There are five complete laboratories for spinning, knitting and weaving, non-woven fabrics, as well as finishing and dyeing.

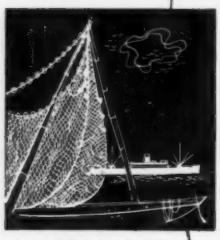
A measure of its scope? In one laboratory alone are 45 looms capable of producing fabrics ranging from sheer voiles to industrial tarpaulins, 10″ to 76″ wide. While warps can be made in lengths from under 100 yards to 90,000.

The new Celanese Development Center is one facet of the overall Celanese program that goes from fabric development in our plants to technical assistance in yours, from the weaving to the wearing—a program unrivalled in this industry. Celanese Corporation of America, New York 16. Celanese®

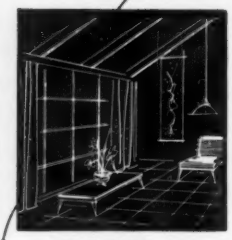
Arnel® Triacetate • Fortisan® Rayon • Fortisan®-36 Rayon • Acetate • Viscose Rayon • Celaperm® Acetate • Celacloud™ Acetate

CONTEMPORARY FIBERS

Upholstery
2100-112
2500-408



Seine Twine
2100-408
2500-408
3360-554
4200-680



Cords & Tapes
2100-408
2500-408
3360-544
4200-680

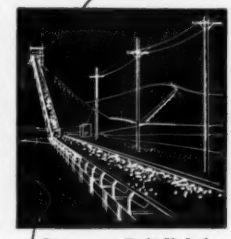
Webbings
2100-112
2100-408
2500-112
2500-408

Carpets
2100-112
3360-168
4200-224
5000-280

7 More Deniers in Durable, Dyeable Caprolan® Heavy Yarns†

In response to growing demand for Caprolan heavy yarns in the industry, Allied Chemical now offers 7 additional deniers and filament counts (as checked below). This completely new class of yarn is now commercially available in the following:

Denier	Filament Count
2100	408
✓2100	**✓112**
2500	408
✓2500	**✓112**
3360	544
✓3360	**✓168**
✓4200	**✓680**
✓4200	**✓224**
5000	816
✓5000	**✓280**
✓7500	**✓1224**
10,000	1632
15,000	2448



Conveyor Belt Fabrics

2500-408
3360-544
4200-680
5000-816

Rope

5000-816
7500-1224
10,000-1632
15,000-2448

If you are looking for a nylon yarn that combines durability with easy dyeing, Caprolan will interest you. Caprolan heavy yarns offer high affinity for almost all classes of dyestuff, require shorter dye cycles for any given shade, and assure you permanent whiteness with virtually no yellowing in storage. This new yarn provides high strength, long flex life, great toughness, excellent abrasion resistance, and is unusually compliant to all the accepted bulking processes.

In addition to the above deniers, Caprolan can also be engineered as high as 50,000 denier to your specifications. These yarns eliminate the need to ply multiple ends of finer deniers, and also eliminate costly fine denier inventories in your mill. To provide longer runs between creelings, they are put up on knotless 10-lb. and 20-lb. packages. Put-ups are on parallel, non-returnable tubes. For a new booklet on Caprolan heavy yarns—or for technical assistance with this new textile tool—call or write us today.

caprolan®

Fiber Sales and Service Allied Chemical *National Aniline Division*

261 Madison Avenue, New York City 16, N. Y.

†Allied Chemical's Polymide Fiber

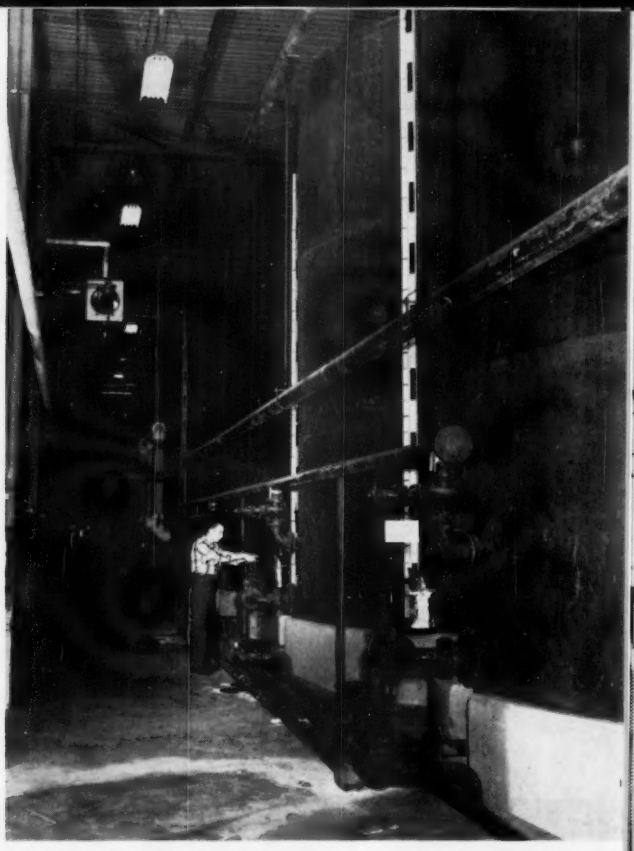
MORE RAYON STAPLE COMING

American Enka's big new fiber plant starts producing

STAFF PREPARED

A NEW rayon staple fiber plant which will have capacity in excess of 50 million pounds a year began commercial production in February. Located at Lowland, Tenn., the new plant was built by American Enka Corp. where the company has long operated a rayon filament plant. Commercial output will be increased by stages until this summer when the plant is expected to reach full operation.

Of steel and concrete construction, the new plant comprises eight connecting structures with a frontage of almost 1,200 feet and containing more than seven acres of floor space for process purposes. Largest of these is a three-story building, 270 feet long by 150 feet wide, housing equipment for preparing viscose—the first major step in transforming wood pulp into rayon. Included in the complex installations are about ten miles of underground piping, ranging in size from three inches to 5½ feet in diameter.



RAYON INGREDIENTS ON TAP—In these huge tanks is stored the viscose solution used to make rayon staple fiber at the new plant of American Enka Corp. in Lowland, Tenn.

Extensive quality control facilities also have been installed so that various textile yarns can be manufactured experimentally from staple fiber in a manner similar to the process used by customer mills.

J. E. Bassill, president, said that American Enka's entry into rayon staple opens a new source of domestic supply for the fiber, and has broadened his company's base for increased service to the textile industry. The fiber will be produced for apparel, home furnishings, carpets, industrial fabrics, and other end uses.

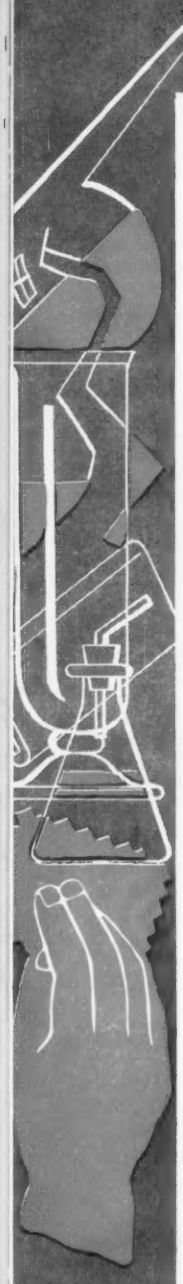
"The long-range outlook for rayon staple fiber is bright," Bassill said, "particularly because rayon staple is an economic fiber with a history of stability of price and has the advantage of being used in 100% rayon fabrics as well as in blends with both natural and other synthetic fibers."

Claude Ramsey, Jr. is staple fiber production manager. Jen Heykoop and J. D. W. Hubbeling continue as plant manager and chief chemist, respectively, of the enlarged operation at Lowland.

Direct sales of the new rayon staple will be handled through American Enka's district sales offices in New York, Providence, R. I., Chattanooga, Tenn., and Greensboro, N. C., under the direction of William B. Shepard, rayon staple sales manager. ■

MORE THAN ONE WAY TO SPIN—Enka's new plant has a quality control system for insuring high quality production. Here roving of Enka rayon staple is drafted into yarn to test its spinning properties

DYEING and FINISHING SECTION



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PRINTING
SPECIAL
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Geigy's part in the textile business has been strictly in the supplying of accessories — dyestuffs and meritorious auxiliary products. Its faith in the textile business is expressed in its plowbacks into research which have resulted in contributions of revolutionary products to provide new economies, simplified procedures, greater plant and consumer performance. These products permit a trading-up in textiles which all consumer research plainly indicates is essential if textiles are to regain their rightful share of the consuming spending dollar. The textile industry has expressed its faith in Geigy by recognizing and rewarding its inventiveness.

DIVISION OF GEIGY CHEMICAL CORPORATION
SAW MILL RIVER ROAD, ARDSLEY, NEW YORK

BRANCH OFFICES: NEW ENGLAND: NEWTON UPPER FALLS, MASS. • CHARLOTTE, N. C. • CHATTANOOGA • CHICAGO
LOS ANGELES • PHILADELPHIA • PORTLAND, ORE. • TORONTO • IN GREAT BRITAIN: THE GEIGY CO., LTD., MANCHESTER

GEIGY

DYESTUFFS

EASIER DYEING ORLON

New merges of Orlon acrylic fiber staple and tow are available, Du Pont reports. The new merges have better whiteness and improved dyeability with cationic dyes. Dyeing procedures remain essentially unchanged. As a result of this new development, the dyeability of Type 42 Orlon with cationic or basic dyes has been increased 30% compared with recent merges of these types. This means that:

1. *The saturation value of the fiber has been increased by about 30% so that a greater amount of cationic or basic dye can be applied than previously, and*
2. *The rate or speed at which cationic dyes are absorbed is about 30% greater.*

There has been no change in any of the other dyeing characteristics of the new merge. Its dyeability with disperse (acetate) dyes is unchanged; its resistance to staining by either acid or direct dyes is the same or slightly better; its receptivity for various finishes is unchanged.

The whiteness of the new merge is significantly improved. Extensive field tests indicate that scoured yarn of the new merge can replace bleached yarn of the older merges in a number of end-uses. The whiteness of the new merge can be improved further by "Textone"® bleaching.

Because of the improved dyeability, the new merge gives better results in deep shades, particularly when the highest attainable dyeing temperature is about 205°F. Richer and deeper shades of black, navy, maroon, cordovan, brown, and hunter green can be dyed; and frequently the dyeing time can be reduced. Also with deep shades, 10 to 20% of cationic dyes can be saved that formerly was wasted due to incomplete exhaustion. However, no reduction can be made in dye formulas which have been giving complete exhaustion.

To insure leveling of light shades made with cationic dyes, the amount of dye retarder that is used must be increased by 50 to 75%. The approximate amount of Du Pont Retarder DO or Du Pont Retarder LAN to be used with shades of various depths is shown in the table.

RETARDER TO USE WITH CATIONIC DYES

Total % of Cationic Dyes	% of Du Pont Retarder DO	% of Du Pont Retarder LAN
0.1 or less	4.0 - 3.0	10.0 - 8.0
0.1 - 1.0	3.0 - 2.0	8.0 - 5.0
1.0 - 3.0	2.0 - 1.0	5.0 - 2.0
3.0 - 5.0	1.0 - 0.5	2.0 - 1.0
5.0 or more	None	None

Because this new merge has an increased capacity for cationic dyes and because it dyes more rapidly, all staple, tow, yarn and fabric must be segregated and clearly marked through all operations, especially through dyeing.

The Du Pont Co. has distinctively marked all shipping packages of the more-dyeable production. Each tow carton and staple bale is marked with a 3" wide, white stripe that is not used on packages of the older merges.

It is also particularly important that the spinner and knitter mark all yarns and fabrics of the more-dyeable production so that they can be handled correctly by the dyer.

New Colour Index Available

The first volume of The Colour Index, published jointly by the American Association of Textile Chemists and Colorists and the Society of Dyers and Colourists (U.K.), has been shipped to U. S. A. subscribers. Volume II is expected to be available about April, 1957; Volume III, about September, 1957, and Volume IV, March, 1958.

Roland E. Derby, Textile Aniline and Chemical Co. president, was installed as treasurer at the January 18 meeting of the AATCC Council in New York, at which George O. Linberg, Synthron, Inc. vice president, presided as president of the association for the first time.

The 1957 AATCC convention will be held in Boston on November 14-16, it was reported by Frederick V. Traut, Globe Dye Works Co., convention committee chairman.

AATCC committee appointments for the year 1957 include: Publications—Weldon G. Helmus, Elliott Morril and H. Gillespie Smith; President's Advisory—Ernest J. Finan, Raymond W. Jacoby, Dr. Walter M. Scott, and Messers Helmus, Derby, Morrill and Smith; Research—V. B. Holland and Joseph H. Jones; Technical Program—Dr. J. E. Lynn; Convention—Bernard K. Easton (four-year term), and Mr. Morrill; Technical Research—Charles A. Sylvester, chairman.

Better Orlon Tow Dyeing

Franklin Process Co., Providence, R. I., has devised a method of dyeing Orlon tow in the wound form on a specially designed core. The tow, after dyeing and drying, is rewound on to a spool for shipment rather than being "snaked" into cartons. The company reports tow dyed Orlon makes possible the knitting of a patterned or multi-colored sweater and still maintain the "hand" of hi-bulk Orlon. The new system is said to eliminate the "matted" effect created when the yarn is dyed on the package system.

Another development by the company is its special method of dyeing hi-bulk Orlon. The yarn is bulked during the dyeing operation but the loft of the yarn is maintained due to a unique operation prior to dyeing. Biggest advantage to the knitter is said to be elimination of size variation which often occurs when sweaters are dyed after knitting.

Nylon for Carpeting.....!

WHY?

HERE'S WHY:

1. **Permanent Textures.** More *permanent* than wool, cotton or rayon.
2. **Cleanable.** Nylon is an easy-to-care-for fiber. The round, smooth nylon fibers prevent dirt from clinging. May be spot-cleaned and shampooed. Dries quickly.
3. **Resists Abrasion and Scuffing.** Will outwear comparable carpeting made from *any other* fiber
4. **Resists Crushing and Matting.** More crush resistance and less matting than comparable wool, rayon or cotton floor coverings in service.
5. **More Resilient.** More resilient than comparable wool, rayon or cotton floor coverings after continued usage.
6. **Economical.** The strongest and toughest of all carpet fibers, nylon will outwear comparable wool and rayon fabrics, thus be actually less expensive in the long run.
7. **Mothproof, Insect-Resistant.** Never a worry about moths! Carpet beetles cannot attack nylon carpeting.
8. **Decorator Colors.** Nylon can be dyed in lasting colors and an attractive range of shades.

Any reliable manufacturer can deliver these benefits in carpeting made from 100% IRC nylon. In addition, manufacturers can, and are delivering nylon blends in superior carpeting which features many of the pluses listed above.

Nylon offers the carpeting industry positive performance characteristics that add up to true value for the consumer.

THE NEW Nylon Staple I·R·C

INDUSTRIAL RAYON CORPORATION, Sales Offices: 500 Fifth Avenue, New York 36, N. Y. • 627 Guilford Building, Greensboro, N. C.

How to make

BETTER NYLON ROPE

BEARING UP UNDER STRAIN—Nylon rope is especially effective in marine service as demonstrated in the picture above. In this rugged use nylon's advantages are great strength, energy adsorption, light weight and resistance to deterioration

By David Himmelfarb & William J. Kaes
BOSTON CORDAGE ASSOCIATES

THE rope or cord is a compact, but relatively flexible structure of fibers, serving to transmit a tensile force from the point where it originates to the site where it is applied. In addition to compactness and flexibility, the characteristics required for successful use in general are (a) uniformity of structure (b) balance (c) tensile strength and (d) stretchability in varying degrees.

The usual fiber rope structure illustrated in Figure 1 is made by twisting the coarse natural fibers together into a Z-twist yarn ordinarily 1/16-1/8 inch diameter, bunching and twisting a number of yarns together into an S-twist strand; three strands generally again twisted to complete the Z-twist rope.

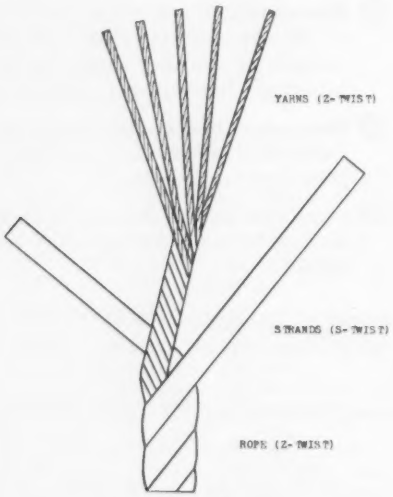


Figure 1

The progressive reversal of twist is the means by which the rope structure is maintained compacted and in balance—the tendency for the rope to untwist being counterbalanced by the effect of the opposing strand twist.

Once the rope is placed in service, the balance between the twisted components can readily be upset by pulling, bending, or abrading stresses. Merely loading the rope in tension, manifests the forces illustrated in Figure 2, with the following effects:

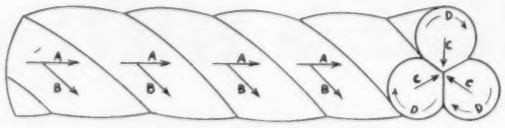


Figure 2

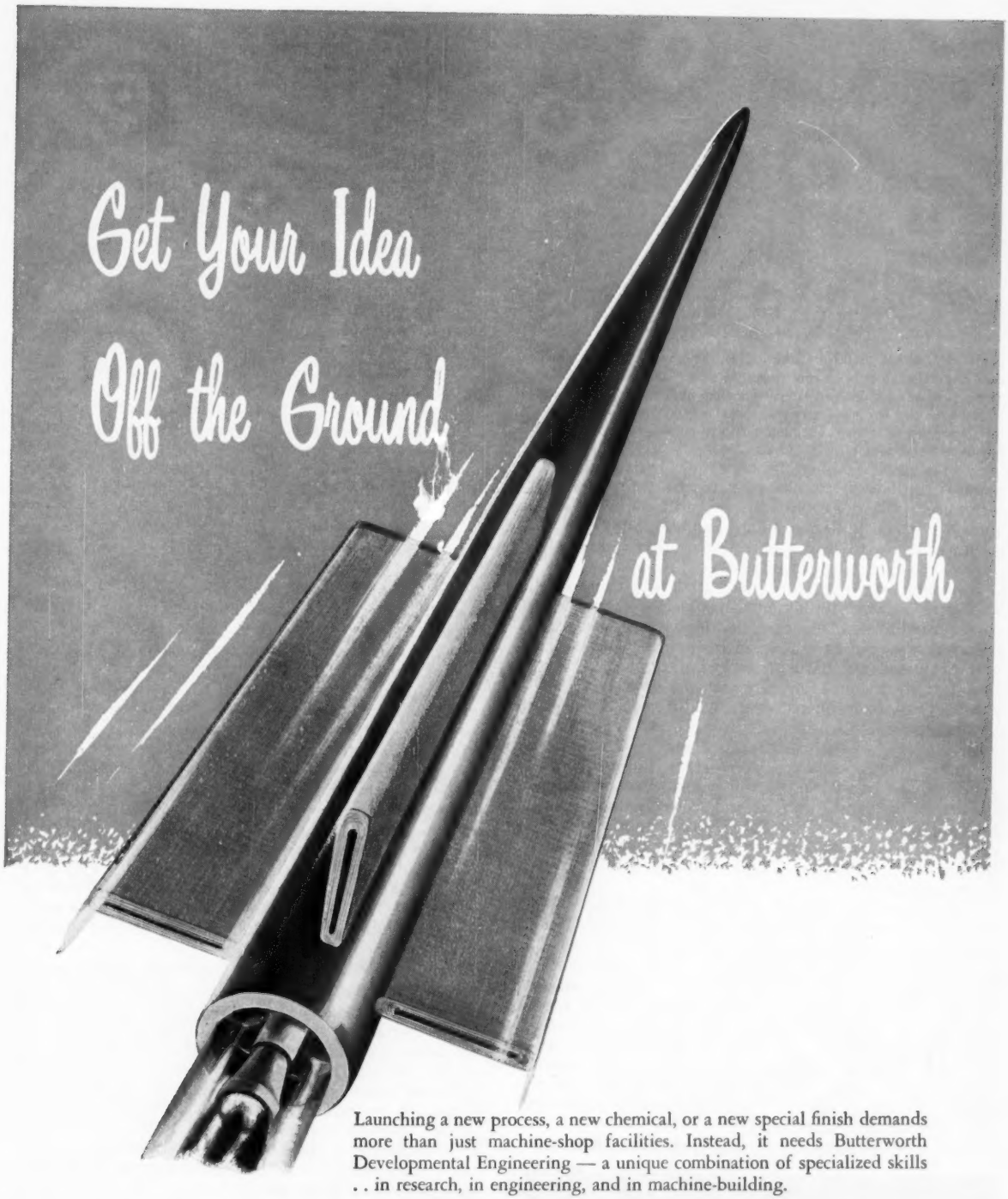
Force Designation	*Effect*
A	Stretches and lengthens the rope
B	Stretches and compacts the strands
C	Compresses strand against strand
D	Twists and tightens the strands, distorting the yarn arrangement

When relatively little stretch is experienced in service loading, Force D is not of major magnitude. However, if the rope should swell by wetting, or otherwise in service be put in condition where its stretchability increases, this force becomes intensified enough to distort the strand structure permanently. If the strand has already been twisted to its limit, the intensified force creates an overtwisted condition which can be relieved only by displacement of yarns (bulges), or forming a strand kink (cockle) when the rope tension is momentarily slackened. Bulges or cockles become visible indications of the inadequacy of the twist relations in structure.

As a new cordage material, nylon made it possible for the ropemaker to develop a rope structure about twice as strong as the best natural fiber rope—manila, and exceptionally outstanding in most other characteristics. In addition, its great stretch and rapid recovery from extensive tensile stresses, impart char-

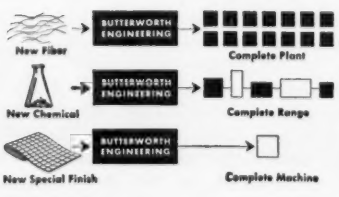
(Continued on Page 48)

Get Your Idea Off the Ground at Butterworth



Launching a new process, a new chemical, or a new special finish demands more than just machine-shop facilities. Instead, it needs Butterworth Developmental Engineering — a unique combination of specialized skills . . in research, in engineering, and in machine-building.

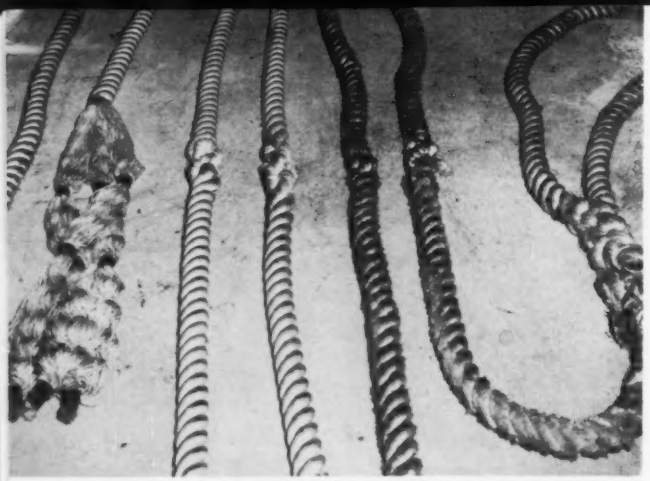
Specialized machines designed and built by Butterworth are now being used at almost every step in the manufacture of textiles — from the spinning of fibers to dyeing, bleaching and finishing. And among Butterworth's standard products are 84 diversified machines for textile finishing. So if your idea is still on the ground, let Butterworth get it airborne for you . . in complete secrecy . . from blueprint to production line.



Developmental Engineering • Research • Machine Building

H. W. BUTTERWORTH & SONS CO.

BETHAYRES, PENNSYLVANIA



HARD WEAR DID THIS—Illustration of the appearance of strand cockles developing in nylon rope in marine service after a short period of use. The heavy loads and extensive pulling have caused the strands to roll back and become overtwisted, eventually kinking with momentary relaxation of tension. (Reprinted with permission from U. S. Navy Bureau of Ships Journal)

acteristics of a shock absorber to the rope, thereby becoming extremely valuable for military operations such as troop glider towing, and civilian services such as marine towing, where this quality of springiness can be used to advantage.

However, applying the usual structure illustrated in Figure 1 to nylon filaments, in place of the natural cordage fibers, led to service inadequacies. When the ropemaker began to use nylon in his rope structures, and projected his natural fiber experience, he soon found that, because of its greater stretch and fast recovery, nylon required entirely different twist relationships to attain the fiber compacting required to withstand the distorting effects of service conditions.

Unless the ropes were excessively twisted, compacting was inadequate; the ropes became limp, splices pulled out, and strand cockling and rope kinking accelerated. Confronted with a rope structure that was excessively twisted to attain desired compacting, strand cockling was the consequence in service application.

One procedure devised to alleviate this difficulty was to heat-shrink the nylon rope. This allowed the ropemaker to avoid excessive twisting and still attain a desirable degree of compacting, also presumably stabilizing the structure. One effect of heat-shrinkage however, was to impart greater stretch to the rope. Further, as illustrated in the photograph, subjected to service conditions, particularly conditions involving high loading stresses and exposure, the heat-shrunk ropes were often found to stiffen and suffer strand deformations as described, which rendered the ropes unservicable.

As a cordage material for the commercial user accordingly, the advantages of a nylon rope anticipated from inherent fiber properties, were, and continue to be, obscured to the extent that manila rope is still regarded as the standard of performance for most rope uses. Even were no service inadequacies experienced, competitive pricing would, of course, remain the major reason for this. Manila fiber costs about 1/5th the price of nylon. To promote nylon rope competitively makes it mandatory that the increased cost be justified in terms of correspondingly improved serviceability. Where the claims and efforts of the ropemaker, anticipated from fiber characteristics, cannot be validated when the fiber is converted to rope form, the rope becoming structurally deformed or stiffened in a relatively short time, the user properly will hesitate to entrust his life and equipment to the rope, let alone evaluating it in comparison with manila or other fiber ropes.

Considerable study and effort has gone into analyzing the causes of these adverse experiences, and the changes in the rope manufacturing process necessary to correct these inadequacies. Summarizing such efforts, the basic cause is found to exist in the twist relationship between yarns, strands, and rope, as influenced by the high stretch of nylon rope and the effect of service forces indicated in Figure 2. Nylon rope will stretch about 2½ times as much as manila rope for equivalent degree of loading, thereby intensifying the prevailing force which tightens the strand. Since the strand has no reservoir for additional twist take-up, deformation as described is inevitable.

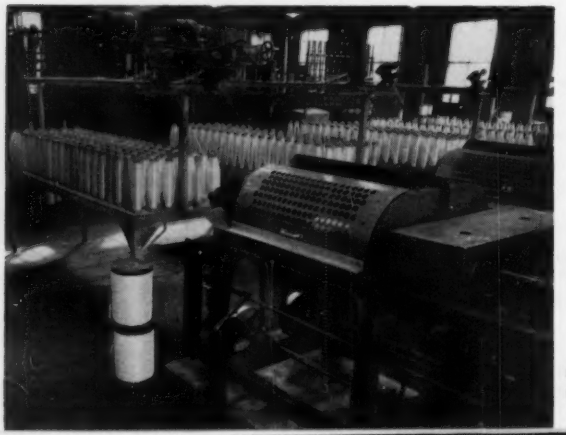
Recently, there has become available a new type rope structure which has shown outstanding success in eliminating strand kinking deformations, thereby improving the serviceability of nylon and other high-stretch fiber ropes. Developed from the service experiences and studies conducted by the U. S. Navy, this rope structure uses a balanced plied cord in place of the singles Z-twist yarn shown in Figure 1. By controlling the size of the yarns, the plies, and the degree of twist, there is afforded a twist reservoir which will successfully absorb additional strand twist without strand deformation or rope stiffening, and which will withstand the effects of high tensile loading and stretching, in superior fashion. Of interest too, is the fact that the rope structure can be compacted adequately without resorting to heat shrinkage.

Advantages for this rope structure, beside exceptional resistance to kinking are : (a) 10-15 per cent more feet per pound for a given size; (b) increase in tensile strength; (c) improved flexibility. Test information available to the ropemaking industry describes, for example, how nylon rope made with the balanced plied cord structure suffered no strand deformation or kinking, even after 1,200 kink-inducing cycles, whereas the conventional heat-shrunk nylon rope structure of the same size and material suffered permanent strand-kinking deformation after only 45 kink-inducing cycles.

The manufacturing experience with this structure shows further that even for service applications where further compacting and dimensional stability is emphasized and heat-relaxation practiced, better process control is attainable for end-product specifications, and lower manufacturing costs realized.

The development of the plied cord structure for nylon rope emphasizes again a philosophical observation especially pertinent to the textile industry: when new fibers become available, invariably they are first handled in terms of past experiences, and inherent characteristics are overlooked to the detriment of these fibers in end-use performance. Many years with

(Continued on Page 87)



MANY INTO ONE—Spinning nylon filaments into rope yarn

Stantex® Oils Find Many Uses in Throwing

BY R. A. JAEGERS
SALES, SUNBURY, PA.

There is a STANTEX oil to meet practically every requirement a throwster has. For example, STANTEX 1060 is an outstanding all-purpose coning oil for nylon yarns providing yarn relaxation, easily controlled oil pickup, low yarn running tensions, good cone buildup, and high knitting efficiency. In addition, it preserves the whiteness of yarns and is easily scoured out in dyeing.

STANTEX 1063 is an oil with comparable properties and is particularly recommended for Ban-Lon* yarn.

One of our most versatile oils is STANTEX 1032 which is used on 40 and 50 denier pre-shrunk seamless welt yarns with excellent results. If your knitters are having trouble with crow's feet and improper tension in the welt, try STANTEX 1032.

When applied to dyed acetate and nylon yarn at coning, STANTEX 1032 provides better color value, as well as lubricity and anti-static qualities.

STANTEX 814 and STANTEX 1243 are anti-graphite oils for the lace trade which have done a superior job for several years. STANTEX 814 is best suited for coning large packages.

STANTEX N.S.P. 125 and STANTEX N.S.P. 127 have been producing excellent results on hosiery yarns for many years and can be considered the pioneer oils in the nylon throwing trade for oiling over PM-90 Size.

*T. M., J. Bancroft & Sons

Standardgrams

Standard Has What It Takes To Assist the Hosiery Dyer

Standard has many wet-processing chemicals and auxiliaries for the dyer. This report, however, will be restricted to those products used primarily by dyers of knitted fabrics. Probably one of the biggest developments in the tricot industry in years has been the advent of the pressure dye machine. We have progressed also by developing several new products to be used in this process.

STANDAPON 95 BM is an easily soluble, nonionic detergent with low-foaming characteristics. It can be used in the single bath method, as well as in a separate scour. STANTEX KBM is an anionic dyeing assistant, wetting, dispersing and leveling agent which can be used in the single or two-bath method.

STANTONE X-6 is a non-yellowing substantive softener and anti-static agent having minimum effect on light fastness and shade of dyed fabrics.

STANDAFIN® R-35 is a thermoplastic resin dispersion for building hand and body and is recommended for both hosiery and tricot finishers.

Several STANTEX oils serve double duty being used by both throwsters and dyers. STANTEX 1060 is applied in coning to dyed Fluflon** and Superloft** yarns and this greatly improves the knitting qualities of the yarn.

STANTEX 1032 is applied to dyed acetate and nylon yarns in the last rinse after dyeing providing an excellent finish for the yarn. This is especially the case in decorative yarns where the finish retards the pickup of needle and machine oils in knitting, thus making the scouring operation much easier.

Our technical representative will be glad to discuss with you these and other Standard products at your convenience.

**Under license, Universal Winding Co.

A Proven Product for Tricot Knitter

The application of STANTEX 814 to tricot yarns in warping has the following advantages:

1. A better, more uniform beam
2. Edges of yarn on beam are straighter
3. Control of static
4. Reduces needle and guide wear
5. Facilitates removal of soil and dirt in scouring.

STANDARD CHEMICAL PRODUCTS, Inc.
HOBOKEN, NEW JERSEY · CHARLOTTE, NORTH CAROLINA
CHATTANOOGA, TENN. PATERSON, N. J. SWANSEA, MASS. SALISBURY, N. C.
SUNBURY, PA. SACRAMENTO, CALIF. GREENSBORO, N. C. GREENVILLE, S. C.

An MTM exclusive report

Nylon use gains in England

By F. C. Livingstone

LONDON—As Britain marked this spring the 10th birthday of home-made nylon, the emphasis in the textile industry was clearly on the use of nylon and other man-made fibers in every branch of the apparel and industrial fabrics markets.

With the second nylon trade fair and the first all-trade textile fair being held within a fortnight of each other in London, a few weeks ago, it has been possible to get a complete picture of the developments made in the past twelve months.

More than a hundred firms exhibited the largest collection of nylon merchandise ever assembled under one roof, in London's Royal Albert Hall, and between them showed the meteoric rise of nylon's popularity.

One thing that has helped nylon's growth in popularity has been the fact that, while virtually everything else needed in life in Britain has advanced in price in the past year, many nylon products have dropped in cost.

A clear picture of this may be had from a comparison of the prices in February, 1956, and those of this year for nylon simulated-fur coats. Last year Astraka were offering a wide variety of nylon furleen fabrics —beaver, mink, etc.—which could be retailed at $85 for a full-length coat. The general opinion then was that they were remarkably cheap. This year, manufacturers were glad to declare that strong demand, coupled with improved production methods, had enabled them to cut these prices to $57 retail. At the same time, they introduced a new sheared nylon furleen, with a much more luxurious feel, which is now being sold at last year's price levels for ordinary nylon-furleen.

GOOD ENOUGH TO EAT OFF—This all-nylon damask table cloth with matching napkins comes in pastel shades of peach, green or gold. Made by William Adams & Co. it is said to be easy to wash, quick to dry, and require no ironing if drip dried

Another thing that clearly pointed to nylon's growing importance was the fact that top London and Paris dress designers have fully accepted nylon as the most popular fabric. Norman Hartnell, the Queen's dressmaker, has even set up his own nylon stocking plant.

The newest yarn for stockings is Agilon which gives a delightfully soft and warm feel with comfortable stretch fit and attractive matt appearance. Several firms showed Agilon stockings in different weights: sheer 15, semi-sheer 20 and service-weight 30 deniers, including 30 denier non-run mesh.

Another new stocking yarn, shown for the first time at the nylon fair, is a monofilament 20 denier nylon, a semi-sheer yarn spun in a single thread. This makes highly snag-resistant stockings in a useful in-between weight, hard-wearing yet good-looking.

Many new anti-snag ideas were shown: two-thread constructions, run stops at top and toes, and reverse seams to give the "inside out" look some women prefer without the usual extra risk of snagging. "Dual-torque" welts also made their appearance. This new idea—a yarn-and-knitting construction—gives extra strength with more comfort and less risk of suspender strain.

Once again, American styling proved extremely popular. Taylor-Woods has commissioned Cusick, of New York, to produce nighties and slips. All his designs won wide approval.

The progress made during the past 12 months with "bulked" or "textured" nylon was clearly evident. Ban-Lon is very soft with a cashmere feel; it has controllable stretch which gives a gentle contour fit

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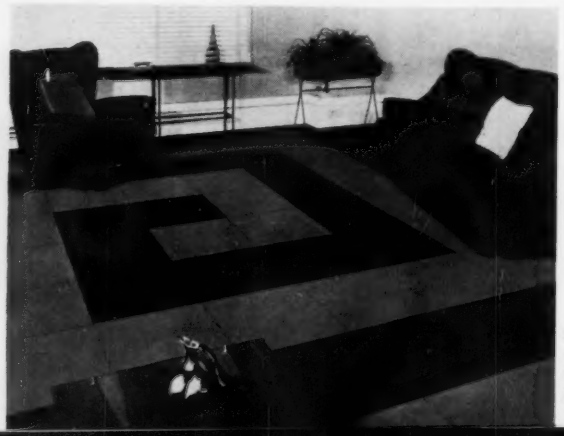
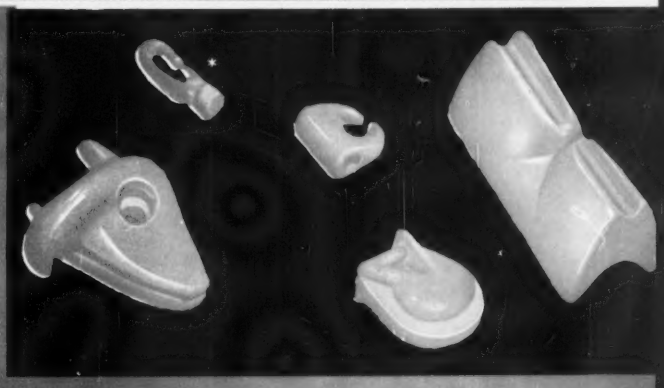


MAKE YOUR OWN PATTERNS—These nylon-reinforced carpet squares recently introduced in England by Petmar Industries are laid with adhesive to form any pattern the homemaker wishes

MACHINERY and EQUIPMENT SECTION

MITCHELL-BISSELL THREAD GUIDES

For Every Textile Service . . . For More Than 70 Years

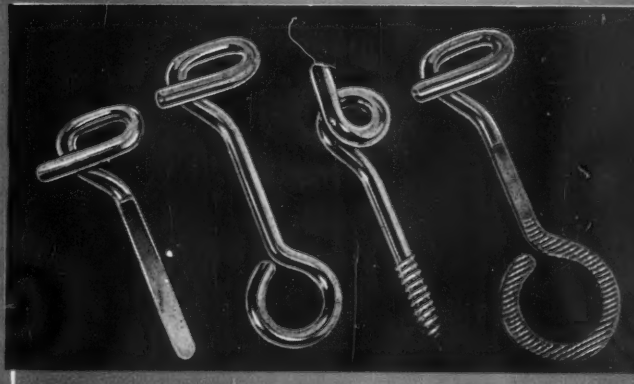


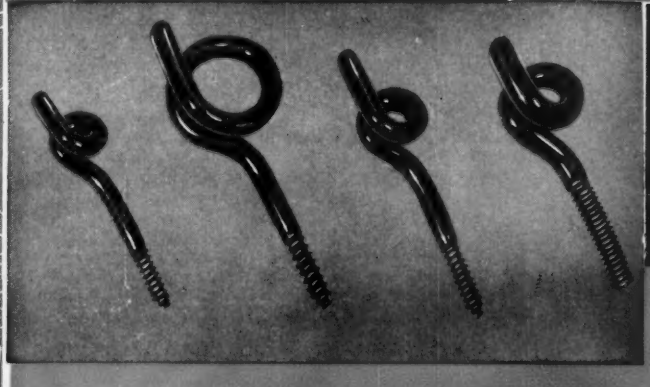
Above—"BLUE SATIN FINISH" PORCELAIN GUIDES.
An exclusive development of Mitchell-Bissell—guides with this finish are more resistant to thread wear than any glazed porcelain guides ever offered the industry. "Blue Satin Finish" Guides, instead of being shiny and glass-like, have a surface of thousands of small rounded grains closely packed together. Reduced wear and longer guide life result because, by breaking the continuity of contact between yarn and guide, friction is reduced. * U. S. Pat. No. 2,152,136.

Left—WHITE GLAZED PORCELAIN GUIDES.
The Mitchell-Bissell Company originated the use of porcelain as a thread guide for the textile industry. The white Glazed Porcelain Guides shown here are representative of thousands of patterns that have been sold to all branches of the textile industry since this company was founded over seventy years ago. Improved in quality from time to time they are still "standard."

Right—CHROMIUM PLATED STEEL GUIDES.
The plating on Mitchell-Bissell Chromium Plated Steel Guides is harder and denser than on any other wire guides. Our methods of fabricating and polishing develop a surface smoothness, with a mirror finish far beyond usual commercial standards. Because of their superior resistance to thread wear these guides are used extensively on machinery for processing rayon and nylon yarns and also for many other severe applications. Also available in Satin Finish.

Below—ENAMELED IRON GUIDES.
Where wire guides are desired, and service conditions do not require chromium-plated guides, our Enameled Iron Guides give exceptionally good service, with a low initial cost. Made with the care and craftsmanship that are standard practice on all Mitchell-Bissell products, these are recommended as centering and ballooning guides, and for cotton, woolen and other soft yarns.





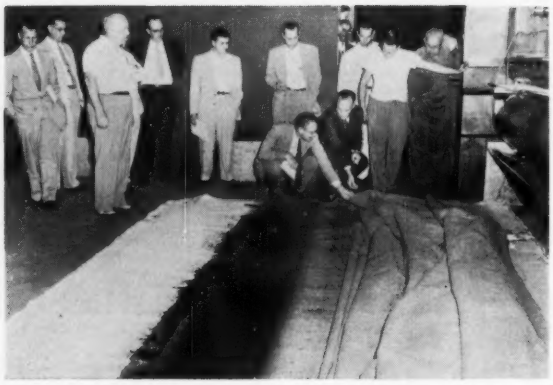
MITCHELL-BISSELL CO.

TRENTON, N. J.

Southern Representative: R. E. L. Holt, Jr., & Associates
Greensboro, N. C.

New machine handles 15 feet widths

Tufted carpet pad dyed



IT LOOKS GOOD—John Fletcher of Du Pont and Gilbert Hopkins of Rodney Hunt check the selvage of the widest tufted carpet (15 feet) dyed padded to date. The test sample showed no center-to-side shading and approximately 50% extraction

ACCORDING to Rodney Hunt, the successful pad dyeing of carpeting in 15-foot widths with the mangle, which is tradenamed "Niptrol," is possible because of new features in the mangle's construction. Among these is a unique method of applying pneumatic pressure so as to eliminate the effects of roll deflection. Conventional equipment, Rodney Hunt points out, produces uneven pressure due to the sag in the roll which results in shading of the fabric from center to side.

The Niptrol mangle, however, provides a uniform squeeze-roll nip through a segmented pressure-roll under overall uniform pressure. Pressure is applied by a pneumatic tube which runs the full width of the machine and bears on staggered brackets attached to the segmented pressure roll. Total pressure is distributed throughout the entire length of the upper squeeze roll to compensate at every point for the varying deflections of the support roll. High extraction (approximately 50% in dye padding) is realized by the use of a small stainless steel roll 4¾" diameter, supported against a larger diameter rubber support roll. At 250 pounds per lineal square inch pressure, a nip of approximately ¾ of an inch results.

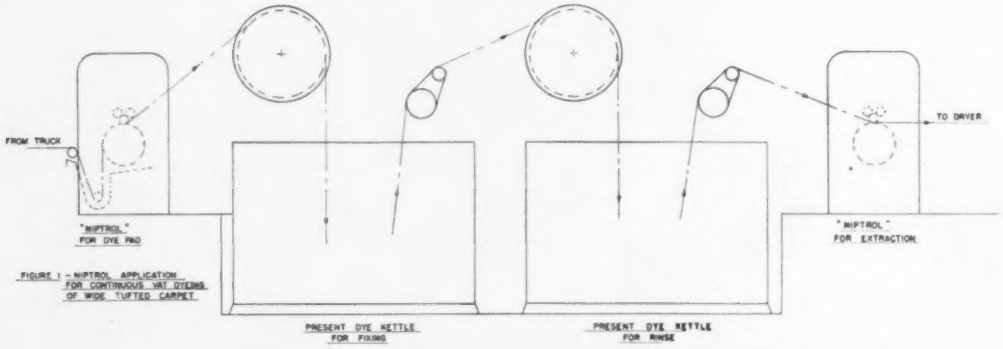


FIGURE 1 – NIPTROL APPLICATION FOR CONTINUOUS VAT DYEING OF WIDE TUFTED CARPET

Fig. 1—Niptrol Application for Continuous Vat Dyeing of Wide Tufted Carpet

The new wide Niptrol mangle achieves the high extraction and uniform pressure across the nip which are so essential in the dye padding of tufted floor coverings. The entire unit weighs 8 tons and is over 24 feet long including drive, 4 feet wide and 8 feet in overall height.

To the Niptrol unit itself was added a dye pan of 100-gallon capacity, constructed of Type 316 (18-12 MO) stainless steel with dye distribution pipe running from center to sides and fed from an outside mixing tank. The unit also incorporates air jet doctors for eliminating the possibility of dye being carried through the nip and being re-absorbed into the selvages.

A 15-foot wide tufted carpet fabric was dye padded

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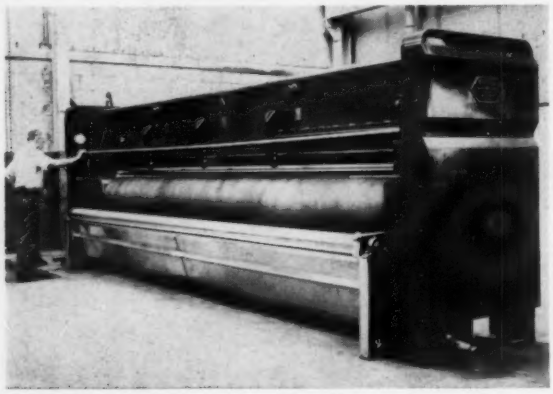


BIG SQUEEZE—This Rodney Hunt Niptrol carpet mangle has a roll face of 17 feet 6 inches and can be used for dyeing and extracting tufted carpets up to 15 feet wide

For the DYER and FINISHER

New Acetate Colors

Celanese Corp. of America's Celaperm acetate will be offered in new colors this fall, including Flare Red C-64, Gaelic Green C-65, and Wedgewood Blue C-66. These colors have not yet been released but are available in commercial and sample quantities, and may be ordered in both filament and bulk yarns. *For further information write the editors.*

Dyeing and Stripping Agent

Vatrolite, a specially concentrated, granular form of sodium hydrosulphite is described in a data sheet available upon request from Royce Chemical Co., Carlton Hill, N. J. Application of Vatrolite in pad-steam dyeing, indigo dyeing, reduced vat dyeing, stripping direct colors and in vat color stripping are highlighted.

Oxidation of Dyes

Typical procedures for oxidation of vat and sulfur dyes on cotton and synthetics with peroxygen chemicals are presented in a booklet released by Becco Chemical Division, Food Machinery and Chemical Corp. Also offered in Bulletin No. 75 is a description of advantages of ammonium persulfate for producing brighter shades, improving hand and knitting characteristics, and allowing easy correction of off-shades.

For further information write the editors.

New Arnel Dyeing Bulletin

Latest commercial formulas for dyeing, printing, finishing and heat treating fabrics of Arnel and Arnel blends are described in a new technical bulletin No. TD-152, now available from the Textile Division, Celanese Corp. of America, P. O. Box 1414, Charlotte, N. C. The bulletin includes a new section on Arnel-acrylic blends.

Vulcanizing Agent

Stauffer Chemical Co. has introduced an insoluble sulfur, Crystex, for use as a non-blooming vulcanizing agent in the manufacture of tires, mechanical goods, molded goods and specialty rubber items. Crystex is said to produce rubber stocks free of the undesirable surface "bloom", thus assuring maximum adhesion between rubber-to-rayon or nylon cord, and rubber-to-rubber layers in building tire carcasses. Stauffer will introduce in May of this year another grade of Crystex containing a plasticizing oil to insure optimum dispersion of the product. *For further information write the editors.*

Water Soluble Resin

Samples of a new water soluble synthetic resin and a data bulletin are available from the manufacturer, Glyco Products Co., Inc., New York City. The new resin, dimethyl hydantoin formaldehyde, is available in tonnage quantities, and described as water-white, practically odorless, with a melting range of 59 to 80 degrees Centigrade. The company reports it is being used for special textile sizing, will not ferment or decompose, and is resistant to oils, gasoline and many aromatics.

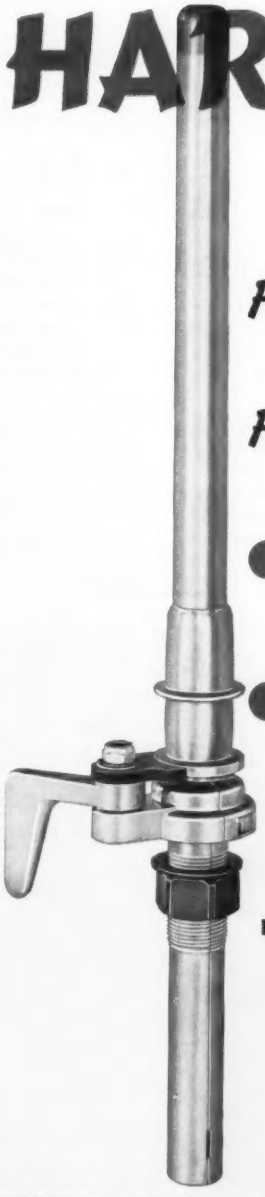
Non-Yellowing Softener

What is claimed to be a permanent, non-yellowing softener and lubricant for use in resin formulations on wash-and-wear cottons has been announced by Dexter Chemical Corp., New York City. The product, marketed as Ampitol PE-30, is a nonionic emulsion of polyethylene which, the company says, increases the tear and abrasion strength of fabrics as well as imparting an excellent hand. Lubricating properties are claimed to improve cutting and sewing of resin-treated cottons.

HARTFORD HAS IT!

For Your Largest Spinning Package

For Your Lowest Yarn Counts



- **Heavy Running Gear**
  - Heavier Blade
  - Heavier Bearings
  - Longer Base
- **Exclusive Cam Action Brake**
  - Hand Operated
  - Positive Latch
  - Sturdy Construction

HARTFORD
Pre-Lubricated Ball-Bearing
SPINDLES
For Twisting & Spinning
Run an Estimated 5 YEARS with NO LUBRICATION

HARTFORD MACHINE SCREW COMPANY
DIVISION OF STANDARD SCREW CO.
HARTFORD 2, CONN.

SOUTHERN DIVISION, ROUTE 3, BOX 314, GREENVILLE, S. C.

by a specially built mangle with a 17½-foot roll face in a recent demonstration at the Orange, Mass., plant of Rodney Hunt Machine Co. Present at the test were representatives of American Viscose Corp., Cabin Crafts Inc., Callaway Mills, the Du Pont Co., James Lees & Sons Co., Inc., C. H. Masland & Sons, Mohawk Carpet Co., and Sandoz Chemical Co.

dyestuff with no evidence of center-to-side shading.

Two systems of dye padding tufted floor coverings with the Niptrol mangle are now possible, one using direct colors and the other vat colors. Direct colors are applied in the pad beck process, utilizing the dye becks already present in the plant. This system, shown in Figure 1, employs the Niptrol mangle for

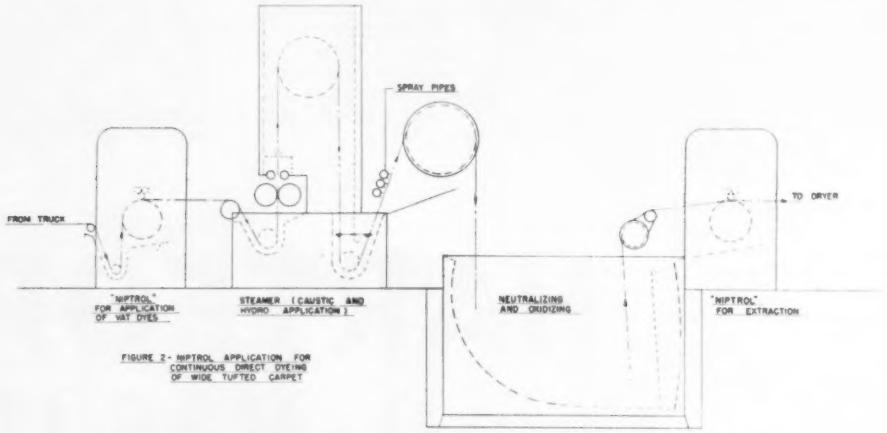

SPRAY PIPES
FROM TRUCK
TO DRYER
"NIPTROL" FOR APPLICATION OF VAT DYES
STEAMER (CAUSTIC AND HYDRO APPLICATION)
NEUTRALIZING AND OXIDIZING
"NIPTROL" FOR EXTRACTION
FIGURE 2 - NIPTROL APPLICATION FOR CONTINUOUS DIRECT DYEING OF WIDE TUFTED CARPET

Fig. 2—Niptrol Application for Continuous Direct Dyeing of Wide Tufted Carpet

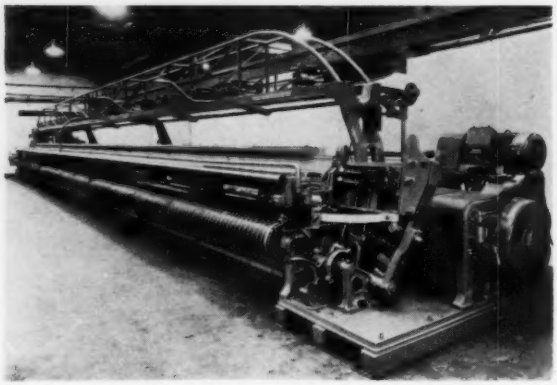
The sample used in the demonstration was a 15-foot by 20-yard latex-backed fabric, composed of 90% viscose rayon and 10% nylon loop pile. Eighty gallons of "Pontamine" Fast Blue BLL was used as the dyestuff at one once per gallon of water at 180°F. The Niptrol unit was operated at 250 pounds per lineal inch pressure and 4 yards per minute.

After treated in a beck for 20 minutes in a bath of 3 ounces of salt per gallon of water at 180°F., followed by 10 minutes rinsing in cold water, the fabric did not change shade, and there was no migration of dyes. Swatches taken from left and right selvages and center showed excellent penetration and levelness of the application of direct dyes, with the fixing and rinsing operations carried out in the plant's existing becks. The same type Niptrol mangle dyes and extracts. Thus a continuous processing system is possible with two Niptrol mangles and existing kettles.

Tests by Rodney Hunt show that the application of vat dyes by the pad steam process is also entirely feasible with the Niptrol mangle. This system, shown in Figure 2, involves the use of the Niptrol mangle for application of vat dyes, with a steamer used for development, followed by a cold spray rinsing and a neutralizing bath in an existing kettle. Extraction is by a Niptrol mangle of the same type used in padding.

Wide, Wide Loom

The Astra Model UF universal type weaving loom, reported to be the widest weaving loom in the country, is to be installed at Shuler and Benninghofen, Hamilton, Ohio, for manufacture of papermakers' felt and other high-density fabrics. The Astra has an over-all width of 70 feet and an effective reed space of 60 feet. Custom designed, the loom was built by Bergedorfer Eisenwerk A-G, of Germany, and sold through its American affiliate, The De Laval Separator Co., Poughkeepsie, N.Y.

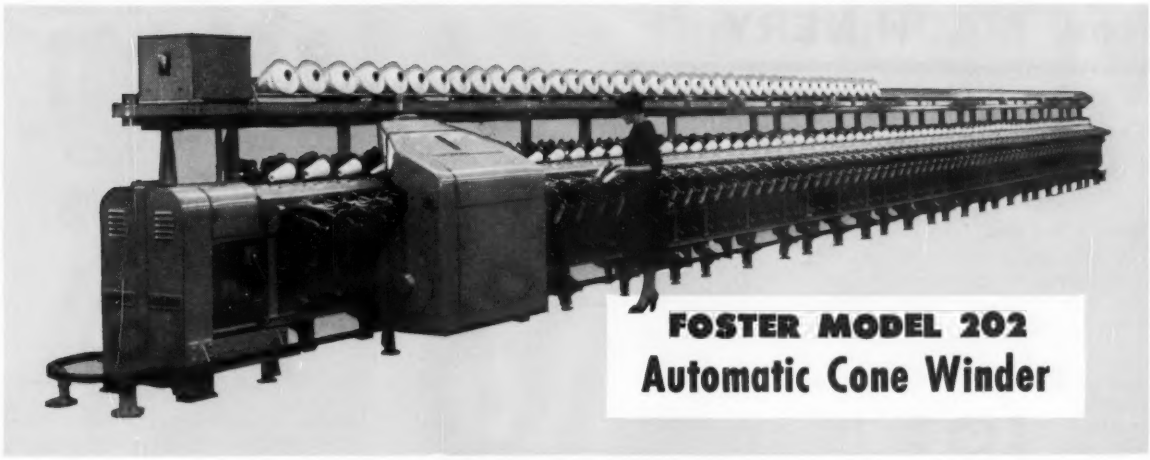


Mills Buying New Equipment

Orders received by Saco-Lowell Shops so far this year apparently indicate many textile mills are seeking to cut labor and production costs by installation of new machinery or by improving existing equipment. Along these lines:

Edenton Cottons Mills, Edenton, N.C., is modernizing its opening and picking. Spartan Mills, Spartanburg, S.C., is installing 124 stay-clean Duo-Roth changeovers in its No. 1 Mill. The Bonnie Cotton Mill, Kings Mountain, N.C., is installing 31 sets of Duo-Roth standard changeovers.

Other recent orders received by Saco-Lowell include: orders for Marion Manufacturing Co., Marion, N.C., a 2-model No. 56 comber and 10 Gwaltney frames, model SG-3; for Owens Corning Fiber Glass Corp., Anderson, S.C., 6-200 spindle glass twisters; for P. Floro & Sons, Manila, P.I., a brand new high grade knitting yarn mill with 12,096 spindles and other necessary preparatory equipment. The Floro firm also has broken ground for a new 10,000-spindle yarn mill in Pasig, Risal, P.I.



FOSTER MODEL 202
Automatic Cone Winder

See It in Operation at Knitting Arts Exhibition Week of April 29 – Booths 82-84 and 99-101A Just to Left of Main Entrance

ASK FOR PRODUCTION & OPERATING COST STUDY. We expect to have available at the Show, for the first time, a time and operating cost study on a mill installation. Ask for a copy. You'll be impressed with the increase in production and the decrease in operating cost which this machine effects.

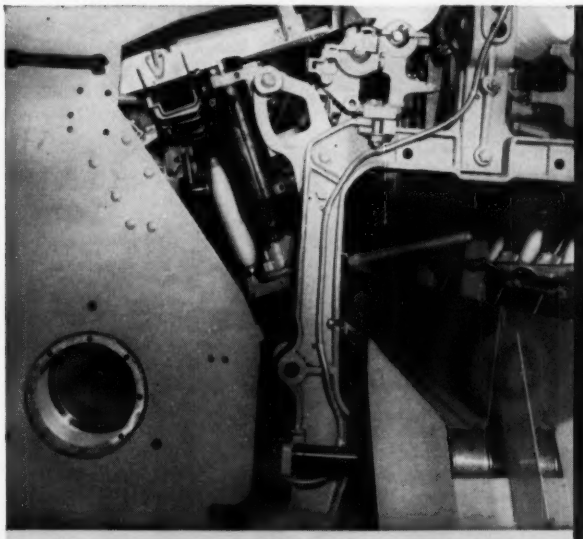
ASK ABOUT IMPROVEMENTS IN DESIGN, including new head end assuring more positive control, central oil mist lubrication, knotters for a wide range of yarns, faster knot tying, and micrometer adjusted slubcatchers.

All operations on the Foster Model 202 are automatic, except the donning and doffing of cones and the positioning of full bobbins for the automatic knot tier.

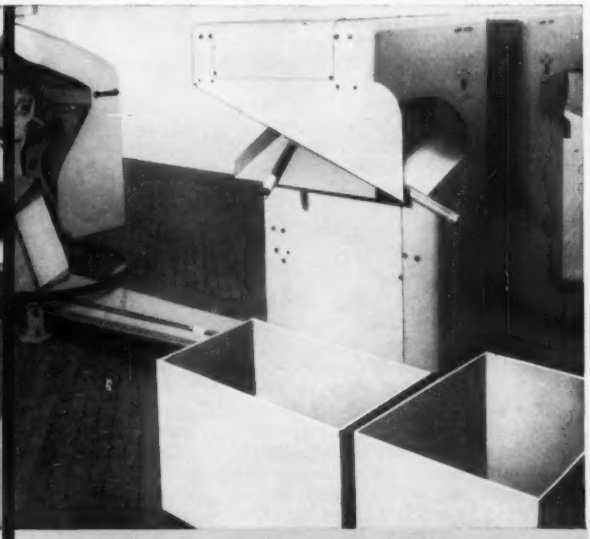
If you don't already have tickets for the Knitting Arts Exhibition, ask us for as many as you want. No obligations.

FOSTER MACHINE COMPANY
Westfield, Massachusetts, U. S. A.

Southern Office — Johnston Bldg., Charlotte, N. C. • *Canadian Representative* — Ross Whitehead and Company Limited, 1475 Mountain St., Montreal, Que. and 100 Dixie Plaza, Port Credit, Ont. • *European Representative* — Muschamp Textile Machinery Limited, Keb Lane Bardsley, Oldham, England



Showing automatic donning and doffing of bobbins.

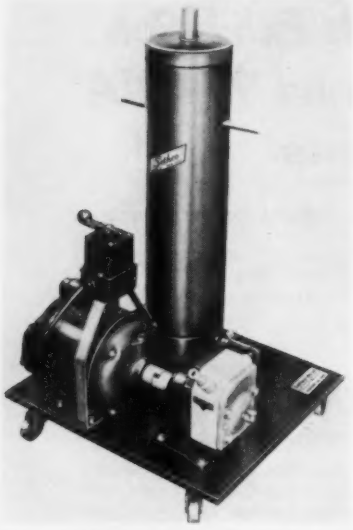


Showing automatic sorting of bobbins.

New MACHINERY
New EQUIPMENT

Dynel Filter Use

A new all plastic, self-priming filter pump with a special Dynel filter medium to remove particles down to one micron size from acid or alkaline electroplating and industrial solutions has been developed by Sethco Manufacturing Co., Brooklyn, N. Y., according to the Textile Fibers Department of Carbide and Carbon Chemicals Co.



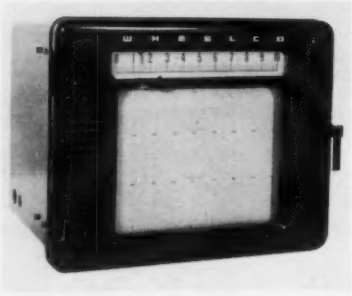
According to Sethco, the acid-resistant acrylic fiber, successfully filters solutions of chromic acid and many other industrial and electroplating solutions. Dynel filter covers are also being used on rotary vacuum sewage filters by the Albany Felt Co., Albany, N. Y. They have been found to result in operational, material and labor cost savings in sewage treatment plants.

For further information write the editors.

Multipoint Recorder

The new Series 8000 Wheelco electronic multipoint recorder, manufactured by the Wheelco Instruments Division of Barber-Colman Co. is reported easy to read, operate and service. The machine can be used for permanent recording of up to 16 points on one chart.

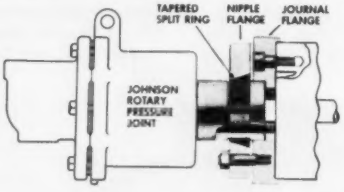
The recorder is a null-balance instrument said to be designed for long life and trouble-free service. Measurements may be obtained with sensing units such as thermocouples, radiation detectors, and



other devices where the measure variable can be resolved into an electrical signal. Up to six limit switches may be incorporated to provide for high and/or low signal indication. Up to four switches may have common front set; additional switches are independently adjustable. *For further information write the editors.*

Quick Release Nipple

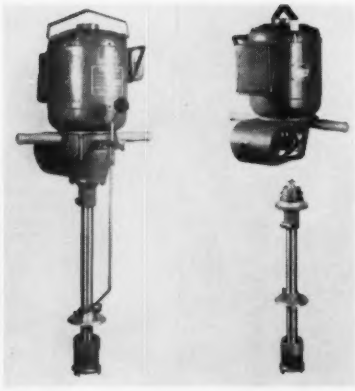
A new quick release nipple has been developed by the Johnson Corp., Three Rivers, Mich., for use with the company's rotary pressure joints. The "Q" nipple consists of three parts—a journal flange, a tapered split ring and a nipple



flange. In contrast to the old threaded nipple, the new "Q" nipple needs only a simple wrench for installation or removal of the joints, thus eliminating any danger of damaging or crushing the nipple with heavy pipe wrenches. *For further information write the editors.*

Improved Mixer

Gabb Special Products, Inc., has announced a new design development for its Shear-Flow industrial mixers which it manufactures for the textile and chemical industries. The new feature is interchangeability of mixing heads. Each head is a compact, self-contained unit consisting of mixing shafts, stator-housing, counter-rotating impel-



lers, seals and all related parts. The interchangeability was designed to reduce to a minimum non-productive down-time at maintenance periods, since the change-over requires only a few minutes. *For further information write the editors.*

Traveling Loom Cleaners

Parks-Cramer Co. has issued Bulletin F65 describing its line of traveling loom cleaners, including the new Oscillaire. Features of the cleaners are continuously oscillating air outlets, elongated flexible sleeves and air jets of extra high velocity, closely controlled in shape, direction and intensity.

The new Oscillaire unit, requiring only one motor and one fan, is mounted on Parks-Cramer's special weave room track. The loom cleaners are applicable to rooms where either high or low relative humidity is maintained and where either fine or coarse fabrics are woven.

For further information write the editors.

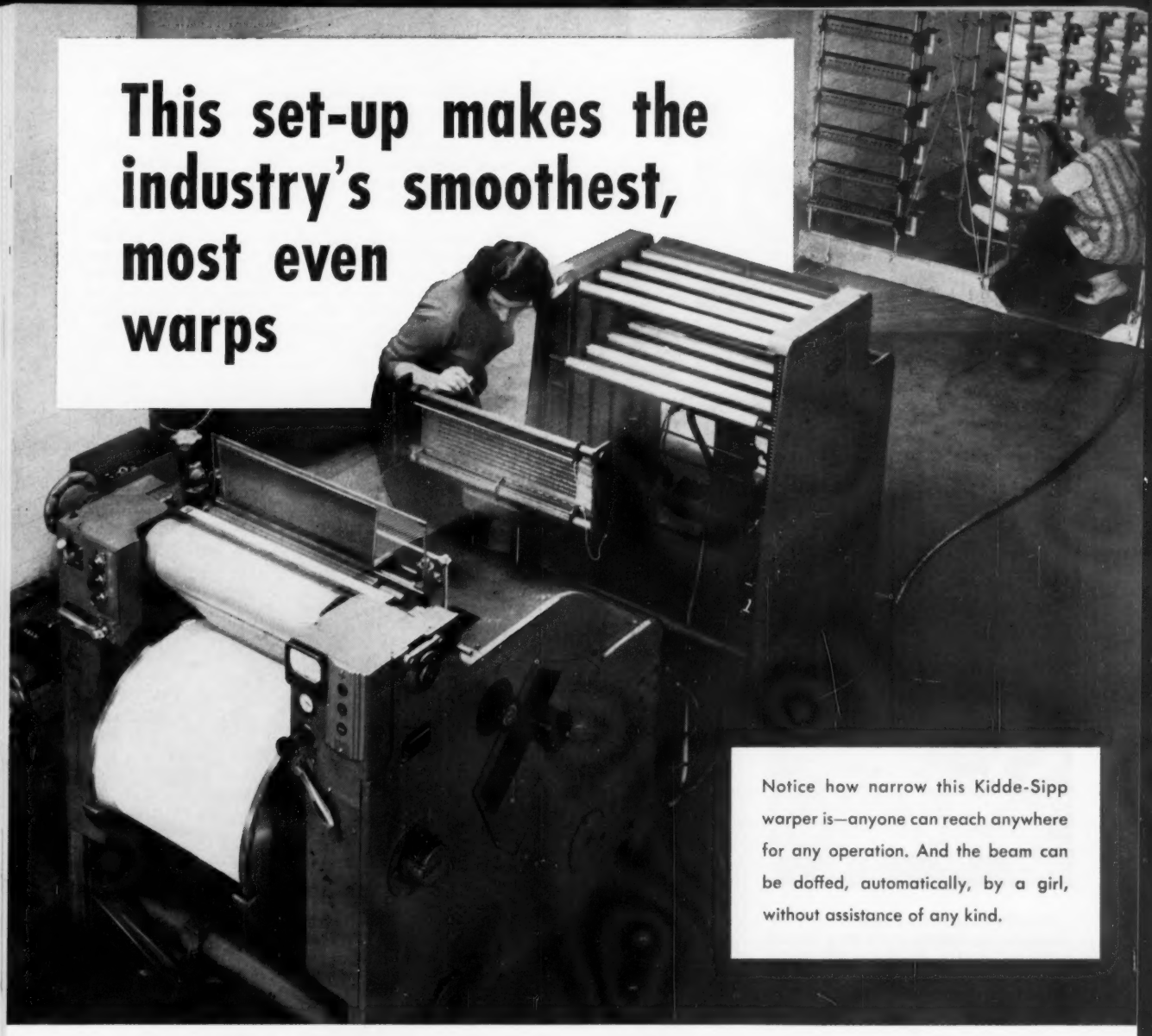
Machinery Circulars Available

Birch Brothers, Inc. has available for distribution circulars of the following new and recent machines: 1247, 20 ft. railway sewing machine with a union special head for heavy fabrics such as tufted carpets 1237, two roll laboratory padder with pressure applied by air cylinders and equipped with a variable speed drive.

1232, vacuum color strainer for straining color paste rapidly. 1252, model 5 pneumatic cut-off winder for use with finishing ranges. 1257, scutcher equipped with air guiders for opening and guiding fabrics.

1227, plate singeing machine for tropicals and blends. 1261, double deck scutchers for one strand of wide fabric or two strands of narrow fabrics. 1265, 20 ft. vacuum extracting machine fitted with Birch patent adjustable slot. *For copies of these circulars, write the editors.*

This set-up makes the industry's smoothest, most even warps



Notice how narrow this Kidde-Sipp warper is—anyone can reach anywhere for any operation. And the beam can be doffed, automatically, by a girl, without assistance of any kind.

it's the KIDDE-SIPP warper with accumulator and creel

The smoothest, most even warp beams available today are being turned out by Kidde-Sipp warpers . . . particularly when backed up by a Kidde-Sipp accumulator and a Kidde-Sipp Creel. Here's why:

Yarn is never scuffed on the warper because brakes on the measuring roll, compression roll, and beam are all synchronized electrically. Furthermore, yarn builds up evenly because the compression roller has 2 hydraulic cylinders, one at either end (instead of just one in the center). The balanced pressure that results gives you perfectly even build-up of yarn. And the hydraulic cylinders produce uniform cushion pressure so that the compression roller will not chatter or bounce.

The accumulator is electrically synchronized with the warper, so that, when the yarn must be backed off to recover a broken end, proper tension is maintained. And even the heaviest packages won't sag out of alignment on the versatile Kidde-Sipp Creel. New, stronger package holders and adapters are the reason. They are made of aluminum, which also puts a stop to rust rubbing off on the yarn.

There are a lot more reasons why you get a better beam with Kidde-Sipp Warpers, Creels and accumulators. Find out more about them by writing to:

TRICOT AND RASCHEL MACHINES • TRICOT WARPERS • HORIZONTAL WARPERS • BEAMERS
CREELS • SLASHERS • WINDER-REDRAWS • TENSOMETERS • TENSION COMPENSATORS

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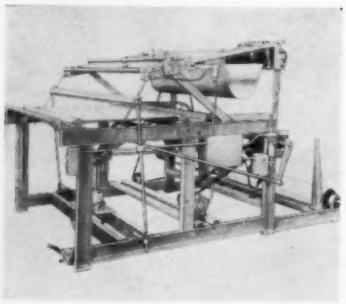
Improved Cloth Folder



New Cloth Folder "M-125"

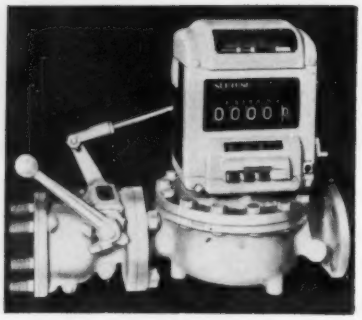
A cloth folding machine with many new and advantageous features has been introduced by Curtis & Marble Machine Co. The new folder, called the "M-125", is operated by one single simplified drive. Clutches, cams or spring, gears and flat belts have been eliminated thus removing the causes for considerable maintenance work and repair parts replacement.

A 15% reduction in the length of the new folder has been achieved over the older type machine. A power saving has also been made by the reduction of moving parts, so that the new folder operates on only ¾ HP.

A new feature is the adjustable stops which permit any desired drop setting up to 8 inches. This deeper drop, coupled with an air operated folder table, allows additional yardage to be folded from the latest type looms weaving longer cuts. The deeper drop also greatly reduces operator fatigue over an 8 hour shift.

According to Curtis & Marble mill tests have proven the folder can be operated satisfactorily at speeds up to 150 YPM. The M-125 Folder has an improved auto-seam-stop, coupled with a dynamic brake, which stops quickly and releases automatically. It is a self-contained machine with power unrolling, all anti-friction bearings and is furnished with a yardage counter for individual cuts. Operation requirements for the 50" wide machine 8' 8" long by 5' high by 6' 6" wide, are ¾ HP and 35 lbs. air pressure.

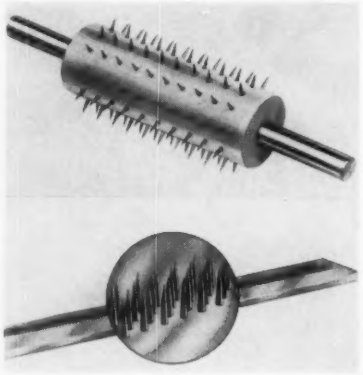
New Liquid Meter



Equipped with a "memory," the Neptune repeating auto-stop liquid batching meter delivers the same quantity of liquid each time the valve is opened, shutting off automatically when the preset quantity is reached. The manufacturer reports the quantity setting may be changed by simply pressing the auto-stop buttons on the register. The new meter is claimed to be excellent for production batching and blending operations where the same formula is constantly repeated. *For further information write the editors.*

Pinned Rolls, Bars

Robert A. Main & Sons, Inc. reports it is now able to produce pinned rolls and pinned bars with pins closer together than ever before possible. The new products, the company states, permits pins to perforate textile material with a very heavy pin concentration thereby making many holes in a small area. The new rolls can be made for wet or dry, hot or cold applications in all diameters and in lengths up to 24 feet long. The company also maintains a repinning service for its customers. *For further information write the editors.*



Helpful Booklet Available

United States Testing Co. has published a supplement to its booklet, "Selected Scientific and Engineering Tables and Data." It provides standard formulae charts and definitions for the fields of chemistry, physics, engineering, plastics, bacteriology, leather, psychometrics, and textiles. Free copies are available by writing to the company at 1415 Park Ave., Hoboken, N. J.

Wastes Made Profitable

The Textile Division of Curlator Corp. has issued Bulletin No. 104, detailing its Rando-Web Process for turning waste and staple fibers into profitable products. The firm's Rando-Feeder was developed to provide a continuous feed of fiber stock to the Rando-Webber. It incorporates a principle new to the textile field known as the "air bridge", which produces unusually uniform fiber feed over an exceptionally wide range of fibers and capacities. *For free copies of this bulletin write the editors.*

Blended Yarn Research Results

Three reports of a research project to improve Navy fabrics through fiber blending have been released for industry by the Office of Technical Services, U. S. Department of Commerce. The reports, sponsored by the Office of Naval Research, are: No. PB 121471—A Study of the Distribution of Fibers in Some Blended Woolen Yarns—Report No. 1, 129 pages, $3.25 per copy; No. PB 121343—A Study of Tensile Mechanics of Some Blended Woolen Yarns—Report No. 2, 119 pages, $3 per copy; and No. PB 121472—Improved Utilization of Wool in Navy Fabrics—Final Report, 8 pages, 50 cents per copy.

New Markem Division

Markem Machine Co., Keene, N. H., has established a Textile and Apparel Sales Division, which will assume full responsibility for sales and service of the company's machines to the textile and apparel industry in the U.S.A. and Canada. Thomas H. Huggins, former manager of Markem's Southeast Sales Division, heads the new division, assisted by Leon Graves. The company also announced appointment of Suehle Associates, Philadelphia, Pa., as exclusive seller in the U.S.A. and Canada of the Markem Model 26 machine method for making complete size tickets used in the men's and boys' outerwear industry.

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VIBRALON is a salesman extraordinary. Place VIBRALON-finished hosiery in the midst of any number of hosiery treated with other formulas and you'll unfailingly select the superior quality of VIBRALON-finished hosiery.

No other formula for hosiery finishing offers so many benefits as does VIBRALON. Here's how this amazing formula increases the value of nylons:

- Provides greater snag and pick resistance for longer and harder wear!
- Makes nylons silky soft . . . while giving them that huggable, sleek look!
- Gives nylons a permanent matte-dull beauty!
- Provides nylons with warmth and absorbency . . . gives summer *and* winter comfort!

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British Nylon

(Continued from Page 50)

without constriction. Ban-Lon garments are warm, opaque and highly absorbent. Taslan has bulk but not stretch and feels soft and warm like cotton. Some of the first garments woven with Ban-Lon and knitted with Taslan were shown for the first time.

A third new nylon is Fluflon, a crimp nylon with a high degree of both bulk and stretch, which can be controlled independently so that the yarn can be tailored for a particular use.

One of the newest ideas, which won wide popularity, were children's T-shirts which "grow" with the child. They are made from a crimp nylon and are hard wearing. They stretch to accommodate the child as he grows. They are expected to be on the market by summer.

Considerable stress was laid on non-inflammable garments and laces. There have been hundreds of serious accidents resulting from the use of inflammable dyes or finishes, which have earned nylon an undeserved bad reputation. Several firms were showing variations of fireproofed garments in which the "won't catch fire quality" is really permanent. The uses of these new nylons range from children's nighties to evening frocks and foundation garments. John Heathcoat & Co., who pioneered in this field, was offering "flare-free" net at 45 and 60 cents a yard in many shades. Norman Hartnell used it in one of the most striking dresses shown in the fashion parade. Heathcoat's also offered a similar non-inflammable taffeta at 75 cents a yard.

Man-made fibers also tended to sweep the market at the four-fold Textile Show, being held for the first time at London's Earl's Court. This show was sponsored by six leading trade associations. The opening was attended by ambassadors of many countries. The show covered 270,000 square feet of space and was divided into four sections: Men's and Boys' Wear; Household Textiles and Soft Furnishings; Carpets and Floor Coverings; and Yard Goods.

GLITTER IN THE NIGHT—This tuxedo shown at the recent London textile fair is woven of black rayon shot through with Lurex silver yarns

The world's largest exhibition carpet covered every aisle at Earl's Court. No less than seven miles of nylon-reinforced, plastic-backed, flame-resisting carpet was laid. It gave an air of luxury to the show and also served as a signpost to the different fairs: strips of different colored carpets pointed the way to the separate sections. The carpet was made by Petmar Industries, of Batley, Yorkshire. This firm also produced a new idea in floor coverings with carpet tiles, made in two sizes: 12 and 18 inches square. Produced in 12 different shades, these "tiles" can be fixed by adhesive to form any pattern desired by the customer.

In every section except the Carpet division, Terylene was very obvious. It has made tremendous strides for both clothing purposes and in household textiles. In combination with wool and cotton, in varying proportions, it is being used in increasing quantities. The main plant at Wilton is working at full capacity and all available supplies are being imported from Canada. Even so, it may not be possible to keep pace with the demands of the market. One of the new uses for Terylene was a combination with linen for men's lightweight suits and jackets, which greatly improved the crease-resistant properties of linen and made for easy laundering.

Terylene was to be seen as curtaining, pillows, blankets, damasks, velours and shirts. The most popular blends of Terylene and wool were in the 35, 50 and 55% ranges. Terylene-cotton blends, which had the feel of the finest poplin, were very popular for all types of men's shirtings, women's dresses and household purposes, with a 67% Terylene—33% cotton ratio. And there were 100% Terylene taffetas, chiffons and satins. The popularity of Terylene may be gauged by the fact that this year's orders for Terylene and wool sports slacks show an increase of no less than 300% over last year's demand.

(Continued on Page 93)

TWO SIDES TO THIS STORY—At the London textile fair, these plastic draperies printed with fern designs attracted a great deal of interest. The drapery is double faced to provide longer wear, easier cleaning

SPECIAL!

NEW CARPET YARN SPINNER

- Direct sliver to yarn spinning.
- Processing any staple from 2⅜" to 8", alone or in blends, with "Versatex" drafting.
- For yarns up to 3s cotton count.
- Package size 10" x 6½", with a range of spindle speeds up to 3,000 r.p.m.
- Weight of yarn on the package 4 lb.
- The carpet yarn spinner is a standard, single sided machine of 48 spindles in two rows.
- Available on quick delivery.

UP TO

6 miles

OF KNOTLESS YARN ON THE BOBBIN!

You are cordially invited to submit sliver samples of material for spinning to your own specification. Working demonstrations will be arranged by appointment.

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Many strange fibers are "meeting on the frames" today, as new developments continually increase the number and variety of synthetics and blends.

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REPORT FROM EUROPE

BY SPECIAL CORRESPONDENT

English reaction to "common market" proposal is mixed; European fiber producers expand abroad

LONDON—Britain's Textile Institute has come up with a generally favorable opinion of West Europe's proposed "common market." But certain branches of England's textile industry are less sanguine about how European free trade area will eventually affect them.

In official statement on the "common market," the Textile Institute had this to say: "An enlarged home market for Western European countries could lead to increased standardization of production within manufacturing units and to more long runs of the kind which are so helpful to the United States' textile industry . . . . and in the United Kingdom this might mean concentration on the marketing of quality and specialist goods for which this country is famous."

Some Millmen Disagree—British Silk and Rayon Users' Association, after pressing for more careful study of impact of "common market" warns: "It is clear the advantages of such a scheme are likely to go principally to those countries with lower rates of wages, standards of living and defense costs, fewer social services and more effective export incentives." Incidently, the Textile Institute had noted that "it does not appear that in textiles cost savings . . . could be achieved . . . sufficient to cause this (transfer of industry) to happen on a large scale."

Italian Rayon Plant for India—Italian Government and Milanese firm Italviscosa Eastern Trading have joined to help finance and construct rayon and staple fiber plant in Mettupalayam, Southern India. Total cost of project—which will have daily output of 10 tons of rayon filament and 10 of staple fiber—would be 70 million Rupees (some $14 million). Combined government-company share of cost will be 80% in form of long-term loan.

And Another Move Abroad by AKU—A. J. Engel, president of Algemene Kunstzijde Unie (AKU) disclosed at recent company meeting that his company had concluded an agreement with Spencer Chemical Co., of Kansas City. AKU's research company will advise Spencer on manufacture of Nylon 6 moulding resins (called Akulon). Spencer would also get the licenses which AKU's research affiliate holds in the U. S. The Dutch firm has grown from three plants with 3,900 employees before the war to seven employing 13,000 at present. Sales have risen six-fold.

Bad News from Switzerland—Swiss nylon and other man-made fiber producers have been having tough time caused by competition of imports and inter-fiber rivalry (See MTM Report from Europe, Feb. '57). A well established company, A. G. Floretspinnerei Ringwald, of Basel, which for many years produced rayon thread and silk yarn, is now in process of shutting down all but its rayon thread operation. Some 250 workers will be laid off.

Norwegian Sales Drive—A group of 34 Norwegian textile mills has launched campaign to increase exports to United States. Export Council representative Kristoffer Oddsen will direct drive. He will deal with agents, importers and retail stores directly. The Norse fabrics will be marketed under common brand name. Norway recently raised tariffs on wide range of cotton textiles—by amounts ranging from 2 to 4%. Multi-colored rayon piece goods' duties were boosted from 16 to 20%.

(Continued on Page 95)

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Parachute cloth
Filter cloths
Sailcloths

THE Kenyon PIECE DYEWORKS INC.

"KENYON OF KENYON, RHODE ISLAND"

NEW FABRICS

NEW YARNS

Dynel Flight Clothing

A blended fabric of 70% wool and 30% Dynel has been selected by the Office of Technical Services, U. S. Department of Commerce as most suitable for Air Force summer flight clothing. Union Carbide and Carbon Corp. reports that their product has been chosen on a basis of comfort, appearance, wearability, tailorability, and flame resistance.

New Vinyl Yarn

Vinyarn, a flexible Vinyl coated nylon yarn, is said to provide ultimate tensile strength. It may be had in any color and in a full range of sizes, and is designed for screen cloth, novelty webbing and other narrow fabrics, automobile upholstery fabrics, shoe and hat cloth, etc. *For further information write the editors.*

New Tent Webbing

A new and improved design is employed in the latest Army tent model developed by the Army Quartermaster. High strength, low-elongation webbing using Fortisan-36, a high-tenacity fiber made by Celanese Corp. of America, forms the structural framework, which takes stresses imposed on the tent in service. Celanese reports that an important weight reduction, a primary objective in all QM developments, is achieved in a tent that remains taut and stable under rigorous service conditions.

Paris Designers Use Synthetics

French designers this season chose the widest variety of fabrics containing synthetic fibers yet to appear in the Paris collections, according to Du Pont. Dior, Balmain, Heim, Castillo of Lanvin and Patou were among the high-fashion designers who selected weaves with Dacron polyester fiber, Orlon acrylic fiber, nylon, and rayon for important daytime ensembles and evening costumes. Dacron for apparel use, made its Paris debut in satins and shantungs. Reflecting the feeling of suppleness that dominates the collections, fabrics in man-made fibers range from fine, drapable satin to soft, lightweight tweeds, basket weaves and novelty ribbon constructions.

Vinyl Patterned Fabric

Vinyl-laminate fabrics are being used in outdoor furniture manufactured by Sun Outdoor Products Co. and Duralite Co., Inc. The Lamiplex Division of Scranton Lace Co. has contracted with these manufacturers to supply Scranton's garden pattern in various colors as covers for chaise lounge cushions and outdoor umbrellas. The fabric is said to be resistant to mildew, water, fire, oil, and grease.

Urethane Interlinings

Urethane Foam, primarily designed for use as interlinings is now available from four manufacturers. It is said to provide maximum warmth at minimum weight and bulk, and may be cut, sewn, stitched, and heat-sealed. Other uses for this material include shoulder pads, safety crash pads for automobiles, throw pillows and cushions, rug underlays, sponges, standing mats, ironing board covers, mattresses and table pads, paint rollers and toys. *For further information write the editors.*

Vinyl Backing Cloth

Pellon, a non-woven textile and bonded fabric developed by Pellon Corp., is now being used for backing and supporting fabric for vinyls. It is said to have stitch-tear strength, resiliency, and multi-directional stretch, and cannot be harmed by mildew and humid atmospheric conditions.

Golf Tournament June 12 to 14

Reservations are being received for the annual golf tournament of the Textile Distributors Institute to be held June 12 through 14 at Shawnee Inn, Shawnee-on-Delaware, Pa. According to Hilda A. Wiedenfeld, executive secretary of TDI, reservations for the tournament will close on May 15 and perhaps at an earlier date if all reservations are taken up before May 15. The golf tournament is limited to men only. Reservations will not be cancellable after June 1.

Reservations will be accepted only for the entire three days, beginning on Wednesday morning, June 12 and ending on Friday, June 14, after lunch. Each TDI members is limited to a total of four reservations including guests. Guests may be either mill, yarn, factor, banker, broker or dyer representatives.

Samuel Schwartz, Cadillac Textiles, Inc., is chairman of the Tournament Committee. Other members are George Greenspan, Cantor-Greenspan Co., Inc.; A. J. Wullschleger, Wullschleger & Co., Inc., and Walter Ross, Rosewood Fabrics, Inc., ex officio, president of TDI.

Action Planned on Unfair Clauses

Members of the TDI are again having trouble with unfair clauses in contracts of their gray goods suppliers—clauses relieving the supplier of all risks in connection with any defects, claiming inherent characteristics of the fiber in the cloth. In 1953, TDI made a survey on this subject with fruitful results because of the cooperation of the membership.

TDI's executive secretary, Miss Hilda A. Wiedenfeld, believes that the same help is needed now. TDI wishes to compile a tabulation of any clauses which are unfair to the purchaser. Member and other textile distributors are asked to send to the Institute at 469 Seventh Ave., New York 18, N. Y., any objectionable clauses. It is emphasized that the faster such information is obtained, the faster TDI can act to obtain relief. It is not necessary to identify the suppliers with whom the objectionable clauses originate.

Costs of Cutting Samples

Some TDI members have been discussing the costly operation of supplying sample cuts to their customers in the cutting-up trade. In this connection one member of the Institute has given permission for publication of the following breakdown in costs of providing samples:

receiving one piece	$.075
putting piece in stock	.10
making one cut and returning balance to stock	.45
packaging and invoicing	.75
delivery charges in New York	.60
total	$1.975

This itemization of costs does not take into account the cost of yardage lost in cutting the goods. To provide further data on this question, TDI's executive secretary, Miss Hilda A. Wiedenfeld, would welcome answers to these questions: Have you ever looked into this matter? Have you accounted for this cost in the operation of your business? Have you any formula for determining the exact amount of this expense? Have you any comments that might lead to a solution of this costly problem?

Dress House Failures Rose in '56

During 1956 financial embarrassments rose sharply over the previous year among women's dress, blouse and sportswear manufacturers and among textile wholesalers and retailers, the National Credit Office, Inc., reports. A sharp increase in financial troubles was also reported among textile dyers and finishers. In contrast, menswear manufacturers and the mill trades showed a ten per cent decline in financial embarrassments as contrasted with 1955.

Virtually all sections of textiles reflected sharp increases in failures in the first six months of 1956. Good business in the last six months notably modified that trend in all but a few lines.

A 32% increase in number of annual failures in the dress line was caused primarily by conditions resulting from a softening market for nylons, rayons, and acetates, the National Credit Office says. Markets for these fabrics improved considerably before the end of the year. On the other hand manufacturers of menswear and of women's coats and suits, where wool fabrics are heavily used, showed either no change or fewer failures than in '55. Contributing to the improvement in these lines was a substantial rise in the price of wool over 1955 levels.

Retailers and wholesalers of textile products had a 48% increase in financial embarrassments. Several of the retailers were large chain store combinations which sought relief in Chapter XI proceedings. Organization deficiencies, rising costs, inadequate inventory control, and over-expansion in fixed assets created the difficulties for these houses.

Textile dyers and finishers were adversely affected by conditions stemming from the weakening of the synthetic fabric market in the first part of 1956. Curtailment of the rapid turnover necessary to their operations quickly causes acute financial distress in this field.

Form Alvic Fabrics Corp.

Formation of a new converting firm, Alvic Fabrics Corp., 469 Seventh Ave., New York City, has been announced by Al Nichols and Vic Kurnit, both of whom have had long experience in the fabrics field. Both resigned from Tanbro Fashions on January 11. The new firm started operations January 15, and specializes in converting cotton, synthetic and rayon fabrics.

REPORT FROM JAPAN

Japanese expect U. S. action against "sign" laws; their exporters seek to check trans-shipment abuses

By B. Mori

OSAKA—Japanese cotton fabric producers are watching with interest for further signs that Federal Government in Washington is serious in its intent of moving against state laws in Alabama and South Carolina requiring retailers to display signs saying they sell Japanese fabrics and apparel. Secretary of State Dulles' recent statement that he had written U. S. Justice Dept. asking for federal action to nullify these laws and that he "presumed" Justice Dept. would take such action was regarded here as some indication that relief could be expected.

Want Laws Checked Now—The Japanese are extremely anxious that trend to enact such laws in U. S. state legislatures be strangled while still young. Spread of such laws outside southern states into states that have bigger populations and bigger total expenditures for textile products would be calamitous from Japanese viewpoint.

Test of Sincerity—Also the Japanese regard action against anti-Japanese laws in Alabama and South Carolina as test of willingness of U. S. to give a little in return for big concessions which the Japanese think they have made in agreeing on quotas limiting their cotton goods imports to U. S.

In fact, some spokesmen of Japanese cotton goods industries here regard the action or lack of action on "sign laws" as terribly important at this time. Failure of Washington to act effectively against these laws would sour Japanese on recently established export quotas, and might jeopardize good will and willingness to compromise that led to establishment of these quotas.

Textiles on Agenda?—It is likely that "sign laws" and whole question of Japanese imports to U. S. and their relation to quotas will be among topics discussed when Japan's new prime minister, Nobusuke Kishi makes his expected visit to Washington later this year. Premier Kishi has already stated that "economic cooperation" will be one of major topics he will discuss when he confers with Dulles and President Eisenhower in Washington.

Japanese Are Policing Themselves—Meanwhile, encouraging evidence of Japanese sincerity with regard to new cotton quotas system and their determination to enforce such quotas was noted here. The Japan Cotton Yarn & Exporters Association at recent meeting decided to regulate exports of ginghams and velveteens to Hong Kong and Singapore to prevent evasion of quota regulations by trans-shipment to U. S. It is also reported here that Japanese Government is scrutinizing exports to other countries of cloth within U. S. quotas to detect possible evasions by subsequent trans-shipment.

Textile Growth in Southeast Asia Watched—The Japanese are intensely aware of importance of export market for their textile products. Japan, as Premier Kishi said in his recent press conference, "still depends on foreign trade". Hence Japanese watch carefully textile expansion everywhere in world for its possible effects on their export markets.

Right now they are keeping a sharp eye on textile developments in India and Philippines. They anticipate stronger competition from Indian mills in countries of Southeast Asia such as Indonesia which produces only about 5% of its estimated annual cloth needs of 900 million yards. But the Japanese do not intend to yield such markets to India's increasingly energetic export drive without a struggle. At the same time, the Japanese view with misgivings the news from Manila that the Philippine cabinet had rejected a recommendation from its own government's economic council that it lift the existing ban on imports of Japanese cotton print cloths and other fabrics. Japan may retaliate by refusing to buy Philippine sugar and lumber. Japanese are also disturbed by the recent order by Philippine finance secretary Jaime Hernandez, forbidding future imports of cotton weaving yarns.

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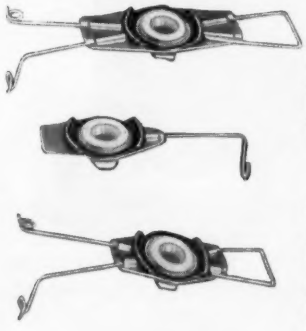
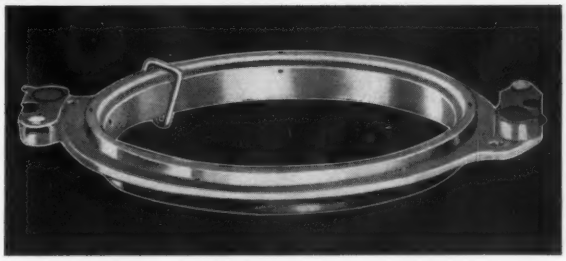


HERR Flyers produce light tensions at high speeds, perfectly balanced for accurate yarn control and reduced vibration.



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Having problems with new fibers? Don't waste time experimenting. New physical characteristics of the fibers require changes in the processing equipment to attain best results. Call Herr for the best Conical Ring and Traveler combination to give you complete control of new fibers and filaments. Write for information today!

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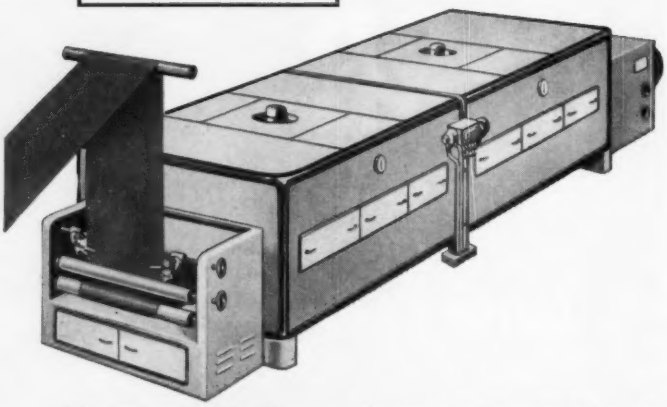
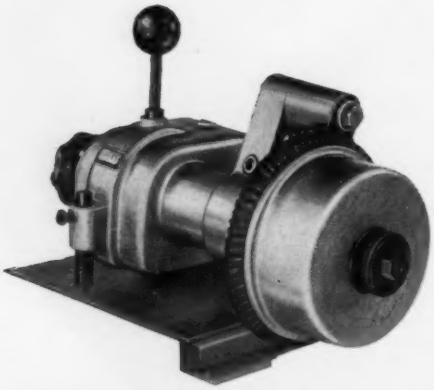
BOOTH 500

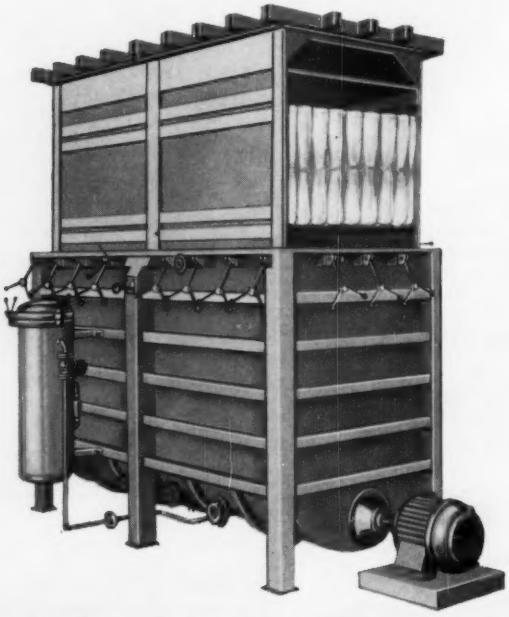
In every one of Cosa's textile machines you'll find the most advanced design now available to the field. Stop in at Cosa's Booth 500 at the 43rd Knitting Arts Exhibition and see them. You'll be more than surprised at the outstanding improvements they offer you in production and quality—factors of utmost importance to today's textile industry.



Vits Lay-on-air Dryer Features extremely high efficiency at speeds of 100 yards per minute or higher. Evaporates 90 lbs. of water per sq. yd. of dryer per hour.



Vits Overfeeding Head For all types of tenters—provides a *positive* overfeed of +40% to −5% with pin-on-pin action. Speeds up to 120 yards per minute.



Scholl Skein Dyer High temperature, high pressure unit provides completely uniform color impregnation. Sizes for 50 to 250 lb. dye lots.

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Bassill

(Continued from Page 32)

during a period when any radical change in the method of distributing our product would have seriously injured many of them."

With his record of achievement as a corporation president, it was unlikely that Bassill, who was only 52 at the time, would have long remained without a post. What is remarkable about the next step in his career is that it did not take him out of the rayon industry as might have been expected. In an industry in which there are less than a dozen major producers, the man who had already served as president of three rayon companies, soon found himself employed as president of a fourth. His new employer was American Enka Corp. which had hired Bassill as executive vice president soon after he left American Bemberg, and made him president on Feb. 3, 1950 following the death of Oakey L. Alexander.

Enka, when Bassill became president, was a sound and successful rayon producer with a record of steady growth since it had been set up in 1928. The company had been established by the Dutch rayon producer, Nederlandsche Kunstzijdefabriek, now called Algemene Kunstzijde Unie N. V., or AKU for short, one of the world's largest rayon producers with affiliates in half-a-dozen countries.

The company's original plant was built a few miles outside Asheville, N. C., on the banks of a water course with the endearingly folksy name of Hominy Creek. The little company town that grew up around the big new rayon plant is named, appropriately enough, Enka. Incidentally, the word "Enka" is derived from the Dutch pronunciation of the initial letters, "N" and "K" of Nederlandsche Kunstzijdefabriek. In 1946, a second plant was completed at Lowland in eastern Tennessee about 100 miles from Enka.

As president of American Enka, Bassill's achievements can be fairly summed up by saying that he has provided the firm, consistent, far-seeing, and always self-effacing and modest leadership that has enabled a good company to grow better and stronger. Under Bassill's administration one of the first things done was a careful study of the company's organizational structure with a view toward introducing the best plan for a two-plant operation. The new plan led to a uniform system of organization for both plants. As part of the new system, the responsibilities and authority of all officials from president down to plant foremen were clarified and set out in writing.

Bassill then took steps to strengthen Enka's position with regard to key personnel. He brought in able men in research, production and sales to meet needs in the personnel structure at these essential points. Of equal value, he began a program of systematic development of the latent abilities of existing personnel. In this connection, he introduced periodical reviews of each salaried employee's capabilities and weaknesses so that each employee knows where he stands and how he is progressing in performance from year to year. Also as part of this program of developing the abilities of existing staff members, Bassill encouraged employees to take courses and participate in seminars on management and other relevant subjects so that their skills could be improved.

In strengthening his company's management practices until they have attained their present generally admitted high efficiency, Bassill has been translating into practice a lifetime's experience, study and reflection on the techniques of good management. His work in the field of management as a science has earned for him a reputation that spreads far beyond the borders of the textile industry and the United States.

Bassill has the firm conviction, based on long years of experience as a manager on the highest and most complex levels of corporate administration, that management is a body of knowledge with principles and techniques as well-defined and identifiable as those of chemistry or any other science. As he himself has expressed it in one of his talks on management practices, "management is an activity unlike any other activity and embodies principles that are both teachable and learnable."

In his work and thinking devoted to management as a science, Bassill has gone beyond mere techniques to stress the moral values that are necessary for good management just as they are necessary for all other useful human activities. In summarizing his ideas on

Rayon yarn being removed from a moisture extracting machine at an Enka plant

management, Bassill has this to say: "Finally, and most important of all, no one has yet found an alternative in management or in any other human endeavor for adherence to principle and integrity of character."

Those who know John Bassill well and who have worked with him for years in corporate management will tell you that "adherence to principle and integrity of character" have been the outstanding elements in his career as a manager.

In March, 1950, within a month of Bassill becoming president, American Enka announced an expansion program that has continued with few interruptions since that time. It has been marked in the past few years by greater boldness, imagination and determination to keep abreast of changing conditions in the man-made fiber industry.

Enka's growth has led the company into the production of nylon and rayon staple fiber so that it is no longer confined to rayon filament yarn and tire yarn. Tied in with these new ventures into diversification of fiber output has been an increasingly heavy emphasis on research. A big new research center housed in a separate building at Enka was completed last year. At the center these is a strong concentration on studies in the field of synthetic polymers—the avenue generally regarded as leading to new and as yet unknown textile materials.

Enka Progressing with Nylon

Nylon, into which Enka moved beginning with experimental work in 1951, is now well established as a commercial product. A nylon plant built at Enka in 1954 turns out staple fiber, industrial and textile filament yarns of the caprolactam or nylon 6 type. The company is also interested in nylon 66, the type produced by Chemstrand and Du Pont, and is carrying on development work with it. Bassill recently announced that a final decision will be made this year as to whether Enka will undertake commercial production of nylon 66.

In the production and marketing of one of its major products, rayon high tenacity yarn for tire cord and other industrial uses, Enka in recent years, has made forward progress. The company has steadily improved its high tenacity yarns, and in 1955 began a program of converting facilities for output of a new super-strength yarn for tires. The conversion program was completed last year.

While work with nylon and new types of rayon filament yarn was going forward, Enka's management became deeply interested in the growing consumption and future possibilities of rayon staple fiber. In 1955, the company, moving with surprising speed, began construction of a new staple fiber plant adjacent to its filament plant in Lowland, Tennessee. Last February, the new plant began commercial production. When fully equipped, it will have a capacity of 63 million pounds a year.

Further Diversification Hinted

As president, Bassill regards Enka's move into nylon and rayon staple fiber as healthy. Diversification, he believes, will permit Enka to grow and continue to be a profitable operation. In his most recent letter to stockholders, he points out that, during 1956, Enka management explored areas for further growth and diversification, and that plans are under consideration for still further broadening the base of Enka operations.

With its steadily growing nylon experience and with a firm foothold in rayon staple fiber and its alertness to yet new opportunities as yet unannounced, Enka has done much to strengthen itself for profitable survival, Bassill believes, in the years ahead with their unforeseen and perhaps surprising developments for a man-made fiber producer. Last but not least, Bassill as president, has always been strongly in favor of good research effort, staff and equipment. Under his leadership, Enka research is prepared to cope with the profitable possibilities inherent in new fibers and other products as yet unrevealed to the world.

This year, John Bassill marks the 25th year since he first assumed the title and responsibilities of president of a man-made fiber producing company. He has the truly unique distinction of having been chief executive officer of four rayon companies, and to have served as president of two of them (Tubize 14 years, Enka 17 years) long enough to have had his abilities thoroughly tested and thoroughly proved. It is a record of which he has a great right to be proud; and it is a record which should hearten all men, in and out of the textile industry, who are encouraged when they see another man distinguish himself in discharging a burdensome task with rare ability, durable optimism, and deep humility.

New Army Textile Reports

Three reports of Armed Forces research on textiles are now available for industry use through the Office of Technical Services, U. S. Department of Commerce, Washington 25, D. C. The three reports are:

"Development of High Tenacity-Heat Stable Dacron Yarns," 57 pages, $1.50 (Order No. PB 121566); "A Study of the Effects of Chemicals on the Properties of Parachute Fabrics," 216 pages, $4.00 (Order No. PB 121679), and "Evaluation of Rot-Resistant Treatments for Elastomer-Coated Fabrics," 51 pages $1.25 (Order No. PB 121420).

Rayon Shoe Thread

Shoe threads with high strength and low costs, made from Type 272 "Super Cordura" high tenacity rayon yarn, are now commercially available to the shoe industry for lock stitching and inseaming. Premier Thread Co., Pawtucket, R. I., prior to introducing the new threads, reports testing them for 18 months under rigorous conditions. Type 272 is the same high tenacity rayon used by tire cord manufacturers. According to DuPont, several other leading thread companies are currently evaluating the fiber and expect to have it commercially available in the near future.

Nonwoven Filter Felt Data

Data Sheet No. 18, an eight-page, comprehensive presentation of the advantages of Windsor felt for liquid filtration, is available on request from American Felt Co., Glenville, Conn. Windsor filter felts are fiber bonded nonwoven structures, engineered to serve as filter media for industrial processing, the data sheet points out.

In plate and frame applications, the felts are characterized by excellent particle retention, freedom from plugging and stability to corrosive and biological attack.

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43rd KNITTING ARTS SHOW

a preview

THE word is going around the textile industry that the Knitting Arts Show this year will be "bigger and better than ever." In round numbers, some 240 exhibitors had booked space by late March, and it is expected that still more firms will exhibit if room in the vast Atlantic City auditorium can be found for them.

This year's Knitting Arts Exhibition, the 43rd to be staged, is again sponsored by the National Association of Hosiery Manufacturers, the National Knitted Outerwear Association and the Underwear Institute. It will be held from Monday, April 29, through Friday, May 3, in Atlantic City, N. J. Anyone desiring tickets may write to any of the three sponsoring associations or the exhibition management, 332 Park Square Building, Boston, Mass., or to the New York office at 468 Fourth Avenue.

Attendance at the last knitting arts exhibit in 1955 was 9,500 representing all types of knitting and knitwear plants from the United States, Canada, Puerto Rico and South America. It is expected that attendance at this year's show will be even larger.

Advance reports indicate that the exhibit this year will be marked by more and even more complex demonstrations of knitting, yarn preparation and finishing machinery functioning under simulated mill conditions.

MODERN TEXTILES MAGAZINE will have a display and hospitality center at the exhibit occupying booths 78 and 79. Readers, advertisers and all other friends of the magazine are cordially invited to drop in.

ABERFOYLE MANUFACTURING CO., PHILADELPHIA, PA.— (411 to 414 incl., 417 & 418)
EXHIBIT: Yarns as well as finished merchandise—hosiery, underwear, knitted outerwear, woven goods in high-fashion cottons—made from their various yarns.
IN ATTENDANCE: Joseph P. Holt, J. S. Kenrick, A. S. Wilson, Jr., Aubrey Huston, Jr., E. J. Neal, Aubrey Hobbs, H. M. Detwiler, Fred Etherington, John Smith, Robert Mishell, R. A. Field, T. S. Byrne, J. A. Holt, R. F. Morris, J. J. Neil, W. G. Vetterlein, David Gott, William Crenshaw, James Boger.

ADELAIDE MILLS, NEW YORK, N. Y.—(140)

ADJUSTO EQUIPMENT CO., BOWLING GREEN, OHIO—(148)
EXHIBIT: Complete line of their "Ajustrite" chairs and stools.
IN ATTENDANCE: Rex Dawson, S. W. Heer, Glen J. Bortner.

ALLENTOWN BOBBIN WORKS, INC., ALLENTOWN, PA.—(150)
EXHIBIT: Bobbins and spools for the throwing of fine denier yarns.
IN ATTENDANCE: Henry W. Mack, Harold S. Barnes.

AMERICAN ANILINE & EXTRACT CO., INC., PHILADELPHIA, PA.—(390)
IN ATTENDANCE: William J. Duddy, Martin H. Silberman, Lynn Kippax, James H. Jones, William A. Moran.

AMERICAN BLIND STITCH MACHINE CORP., NEW YORK, N. Y.—(600)

AMERICAN DYESTUFF REPORTER, NEW YORK, N. Y.—(211-212)

AMERICAN & EFIRD MILLS, INC., MT. HOLLY, N. C.—(387, 388, 397, 398)
EXHIBIT: Yarns; spun fiber garments; finished fabrics of cotton, Acrilan, Orlon, and blends of these fibers with wool; fabrics made of Ban-Lon; sewing threads.
IN ATTENDANCE: T. C. Smotherman, R. J. Freese, R. M. Salisbury, E. H. Timanus, W. E. James, G. W. Pierce, R. M. Ingle, W. H. Suttenfield, C. F. McPhillips, R. F. Jessen, C. W. Krentler, H. R. Swagel, W. H. Hall.

AMERICAN ENKA CORP., NEW YORK, N. Y.—(163, 164)
EXHIBIT: 3-part display showing their nylon and its end uses, and Enka rayon for textile and for industrial uses.
IN ATTENDANCE: Kenneth N. Bacon, M. Boylan Carr, C. L. Hayden, A. B. Harris, R. L. Peacock, W. M. Pomeroy, Jr.

AMERICAN LAVA CORP., CHATTANOOGA, TENN.—(28)
EXHIBIT: Complete line of AlSiMag thread guides for the knitting industry, also line of industrial tapes for the textile industry.
IN ATTENDANCE: R. B. Williams, J. B. Shacklett, J. E. Spearman, J. W. Crisp, W. M. Crittenden, W. J. Geary, J. S. Gosnell, Jack List, Milt Schantzen.

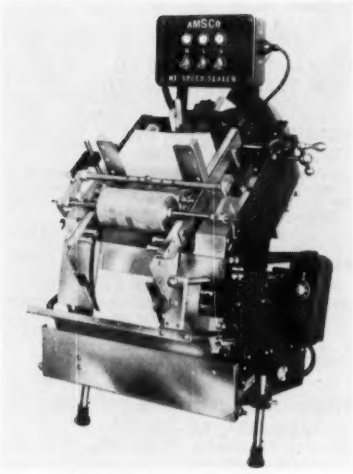
AMERICAN SAFETY TABLE CO., NEW YORK, N. Y.—(339, 349, 351, 352)
EXHIBIT: Complete range of AMCO stands and motors as well as their collar, cuff and flap forming and pressing machine, also new developments of interest to the sewing industry.
IN ATTENDANCE: David Frankel, Julian Frankel, Robert Pettit, Benjamin Greenawalt, Al Bolder, Sid Rotman.

AMERICA'S TEXTILE REPORTER, BOSTON, MASS.—(153, 154)

AMERICAN THREAD CO., INC., NEW YORK, N. Y.—(403 to 406 incl.)

AMERICAN VISCOSE CORP., NEW YORK, N. Y.—(409, 410, 415, 416)
EXHIBIT: Filatex yarns, Colorspun yarns and staple, new knitted fabrics.
IN ATTENDANCE: T. H. Andrews, Daniel A. Davis, John C. Folsom, Walter Hadfield, Walter Hauer, Frank F. Hilson, John H. Kemp, Herbert C. Simpson, Frank Soling, William S. Sollenberger, Leslie L. Walmsley, Irvin Welch, Robert Werntz, Jackson A. Woodruff.

AMSCO PACKAGING MACHINERY, INC., LONG ISLAND CITY, N. Y. MILLER WRAPPING & SEALING MACHINE CO., CHICAGO, ILL. SIMPLEX PACKAGING MACHINERY, INC., OAKLAND, CALIF.—(121, 122, 123)
EXHIBIT: (Amsco) The Amsco power jaw sealer-labeler machine and their new rotary bag sealing machine.
(Miller) A Corley Miller Kwik Wrap machine, designed for wrapping various textile items in plastic films.



AMSCO—Hi Speed Sealer

(Simplex) New Simplex bag making machine for fabrication of side-weld type polyethylene bags.
IN ATTENDANCE: Edwin E. Messmer, John Sylvester, John Keenan, Gene Cignoli, Steve Watson, Ed. Watson, John Kelly, George Wiedersheim, Herbert Weber, Frank Czifra, R. H. Freeman.

ARROW NEEDLE CO., MANCHESTER, N. H.—(510-513)
(with Textile Machine Works)

ATLANTIC RAYON CORP., NEW YORK, N. Y.—(327 to 329 incl.)
EXHIBIT: Dyed nylon and rayon yarns on all types of put-ups; also dyed stretch nylon yarns on cones and headless packages, as well as various types of combination-yarns that has been dyed various color combinations.
IN ATTENDANCE: Louis Malina, Harold F. C. Wilcox, Fred H. Diamond, Fred Malina, Arthur Malina, Horace Greene, Ernest Krueger, Dave Aibel, J. J. Richrath, Roy Westland, Earle Tabor, E. K. Woods, Jack Gutcheon, Harry Calder, Nat Waiman, Ben Appelle, S. H. Eisenberg, Jud Shapiro, Bob Meltzer.

BAGPHANE CORP., BROOKLYN, N. Y.

JOSEPH BANCROFT & SONS CO., WILMINGTON, DEL.—(155 to 159 incl.)
EXHIBIT: Ban-Lon yarns and a wide variety of garments made from it.
IN ATTENDANCE: L. W. Rainard, R. H. Hutchinson, Frank Cooper, Harry Pennewell, E. H. Shattuck.

BANNER YARN & DYEING CORP., BROOKLYN, N. Y.—(261)

BARBER-COLMAN CO., ROCKFORD, ILL.—(213)
EXHIBIT: None. Space will be used as reception booth.
IN ATTENDANCE: L. L. Lideen, F. R. Lincoln, F. D. Taylor, N. H. Alford, J. C. Ballard, J. F. Carter.

BEMIS BRO. BAG CO., MINNEAPOLIS, MINN.—(142)
EXHIBIT: Wide variety of polyethylene bags.
IN ATTENDANCE: Earl Taylor, H. O. Parker, R. J. Potter, Edward Christenburg, Edward Fuller.

BENTLEY KNITTING MACHINERY ORGANIZATION, INC., PROVIDENCE, R. I.—(55-56)
EXHIBIT: Extensive showing of the products of their knitting machines, including hosiery of all types and outerwear and underwear.
IN ATTENDANCE: Members of the Bentley Organization from England, Canada, Providence headquarters and Charlotte, N. C.

SIDNEY BERTNER CO., NEW YORK, N. Y.—(610)
EXHIBIT: Yarns of all types.
IN ATTENDANCE: Sidney Bertner, Bernard Bertner.

BOGER & CRAWFORD, PHILADELPHIA, PA.—(530 to 533 incl.)
EXHIBIT: Fabrics made of cotton, synthetics and blends.
IN ATTENDANCE: Fredaricka Boger, Ernest T. Boger, Alfred H. J. Boger, Ira B. Wattis, William R. Carothers, John Carrasco, Roland, D. Seeback, Morris R. Copeland, Bruce Lauderbach, Harry Segal, Sam C. King, Jose Luis Lainz, Gregorio Solis.

BONIS BROS. MACHINERY CORP., NEW YORK, N. Y.—(600)
EXHIBIT: Their Model BK-10 Overseam Sewing Machine for sweaters.
IN ATTENDANCE: Caesar Bonis, Jr., Burt Zeldis, Frank Greca.

BRANT YARNS, INC., NEW YORK, N. Y.—(140)

BRINTON FABRICS MACHINE DIVISION, NEW YORK, N. Y.—(231 to 242 incl.)

BURLINGTON ENGINEERING CO., INC., GRAHAM, N. C.—(17, 18)

CANNON MILLS, INC., NEW YORK, N. Y.—(505, 506)
EXHIBIT: Natural and dyed combed and carded cotton yarns, blended fiber yarns, and fabrics made from them.
IN ATTENDANCE: W. C. Cannon, H. E. Aken, J. C. Williams, T. R. Smith, W. F. Denning, D. A. Long, W. H. Curlee, F. E. Byrne, C. V. Albright, J. C. Bartlett, Henry Crumbliss, F. A. Dusch, Jr., J. J. Meyer, J. F. Russell, J. W. Turner.

CARBIDE AND CARBON CHEMICALS CO., NEW YORK, N. Y.—(434, 435)
EXHIBIT: Dynel staple fiber in a variety of knit fabrics, both 100% Dynel and blends. Knit industrial fabrics for overlays on glass-reinforced plastic laminates and fabrics for other new uses.
IN ATTENDANCE: A. L. Snyder, J. S. McGilly, W. T. Burgin, C. A. Strodl, H. L. Carolan.

CARON SPINNING CO., ROCHELLE, ILL.—(422)
EXHIBIT: Sweaters and other knit fabrics, as well as their Caraloft and other yarns.
IN ATTENDANCE: O. J. Caron, John B. Caron, W. H. Stocking, B. J. Zintak, Jr., Al. Amatruda, R. J. Caron, J. B. Cameron, Alexander Cameron III, and Wm. Eipper.

CARRIER CORP., SYRACUSE, N. Y.—(369 to 371 incl.)

CARWIL PUBLISHING CORP., NEW YORK, N. Y.—(53)

CELANESE CORP. OF AMERICA, NEW YORK, N. Y.—(214 to 217 incl.)
EXHIBIT: Wide variety of knit fabric constructions in the various Celanese fibers. In addition to fabrics, various garments will be on display and modeled.
IN ATTENDANCE: George Hein, Edward Engel, William O'Neil, Hamilton Macauley, Bernard Kearney.

CHANDLER MACHINE CO., AYER, MASS.—(542)
EXHIBIT: Special pleating, button sewing, ribbon sewing, and sample cutting-pinking machines.
IN ATTENDANCE: R. Shields, Arthur A. Maxant, R. C. Maxant.

CHEMSTRAND CORP., NEW YORK, N. Y.—(66 to 68 incl.)
EXHIBIT: Large colorful display pointing out the progress and new developments in their Acrilan fiber and their nylon yarns. Also an exhibit devoted to their new Chemnyle process, and showing of carpets and blankets of 100% Acrilan.
IN ATTENDANCE: E. A. O'Neal, Jr., W. G. Luttge, M. H. Morse, R. E. Smith, B. F. Bertland, C. W. Carvin, Jr., D. W. Bedell, C. W. Gayler.

CLENTIMACK CO., INC., NORTH ATTLEBORO, MASS.—(509)

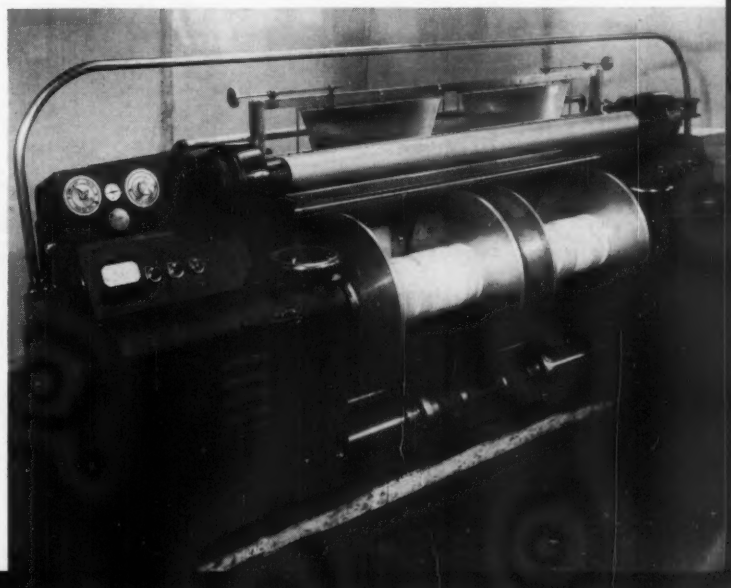
CLOVERLEAF-FREELAND CORP., HAZLETON, PA.—(37)

COCKER MACHINE & FOUNDRY CO., GASTONIA, N. C.—(88, 89, 94, 95)
EXHIBIT: New Model MB-50 tricot warper.

COMER-AVONDALE MILLS, INC., NEW YORK, N. Y.—(375, 376)
EXHIBIT: Their cotton knitting yarns and garments made from them, also samples of their "Avonmarl" yarn as well as garments made from it.
IN ATTENDANCE: Bruce C. Weber, W. R. Austin, Peter R. Branton, L. B. Allen, George Clark, I. C. Schumacher, Joseph E. Bush, Winston Hardegree, Charles Crowther, George Bailey, Hugh Morrow, S. E. Fulton, Robert Fulton, Jeff Ballow.

CONAPAC CORP., NEW YORK, N. Y.—(601 to 602)
EXHIBIT: Their Roto Wrap Model B twin track knitgoods packaging machine and their Poly-Master combination machine for making pouches and bags of polyethylene.
IN ATTENDANCE: R. H. Schnoor, S. H. Brezinski, E. E. Miranda.

CONTINENTAL CAN CO., INC., NEW YORK, N. Y.—(389)
EXHIBIT: Their line of Conomet metallic yarns.

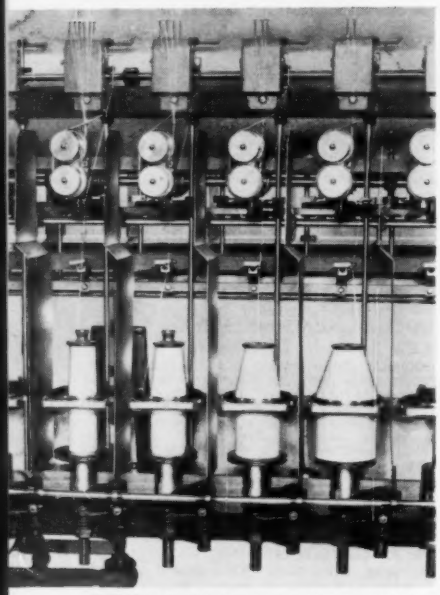


COCKER—New Model MB-50 Tricot Warper

IN ATTENDANCE: E. P. Dunham, Jr., Helene G. Fontaine.

COSA CORP., NEW YORK, N. Y.—(499, 500)
EXHIBIT: They will show the following textile equipment: Mahlo Textometer, Vits Lay-on-Air Dryer, Vits Drying Tenter, Overfeeding Heads which can be used as an accessory to any tenter, Scholl Skein Dyeing Machine, Vollenweider HPl Shearing Machine, Projectina Optical Analyzer, and Saladin Flock Printing Machine.
IN ATTENDANCE: Gilbert Luy, Klaus Bahlo, Leonard Platnick.

COTTON YARNS, INC., NEW YORK, N. Y.—(145, 146)
EXHIBIT: Together with Botany Cottons, Inc. of Gastonia, N. C. Combed, mercerized, carded, dyed and bleached cotton yarn, as well as blended yarns.
IN ATTENDANCE: C. A. Ross, Robert, J. Gurney, Henry M. Kamins, Heinz O. Peuler, Allan Kushner, Mack Reibel.



FLETCHER—Master Duplex Doubler Twister

CRAWFORD CO., INC., KERNERSVILLE, N. C.—(85, 86, 87, 96, 97, 98)
EXHIBIT: Their Model AA-3 mosaic pattern machines and a Somerset clipping machine, circular knitting machine parts and attachments.
IN ATTENDANCE: H. E. Crawford, Sr., H. E. Crawford, Jr., Th. A. Fulton, D. A. Smith, Willis Stinnette, R. D. Johnson, J. H. Wells, Narcisse Aubre.

CROSS COTTON MILLS CO., MARION, N. C.—(543, 544)
EXHIBIT: No display. Space will be used as reception booth.
IN ATTENDANCE: Eugene Cross, Jr., Oliver R. Cross.

CUMMINGS-LANDAU LAUNDRY MACHINERY CO., INC., BROOKLYN, N. Y.—(107, 108)
EXHIBIT: Knitwear washing plant consisting of washer, extractor and reversing drying tumbler.
IN ATTENDANCE: Eugene Cummings, David Green.

CUTTING ROOM APPLIANCES CORP., NEW YORK, N. Y.—(492 to 495 incl.)
EXHIBIT: Cloth laying machines for tubular fabrics, sectional cutting tables, automatic thread trimmers, and cloth measuring and examining machines. Featuring new manually operated cloth spreading machine.
IN ATTENDANCE: D. Grossberg, B. Nathanson, Abner I. Gilbert, Bert Gottschalk, Al Greene, J. E. Fox, A. I. Pransky.

DAILY NEWS RECORD, NEW YORK, N. Y.—(139, 139A)

DAVISON PUBLISHING CO., RIDGEWOOD, N. J.—(61, 62)

DEERING MILLIKEN RESEARCH CORP., PENDLETON, S. C.—(421)
EXHIBIT: Agilon stretch, textured and bulk yarns and representative products made from them.
IN ATTENDANCE: Russell B. Newton, Norman C. Armitage, Cyril Evans, Robert McCullough, Fred Langdon, Miss Lou Ella Ochs, Miss Anne T. Trumbull.

DELTA AIR LINES, INC., ATLANTA, GA.—(612)

DIXIE MERCERIZING CO., CHATTANOOGA, TENN.—(527, 528, 529, 534, 535, 536)
EXHIBIT: Garments, fabrics and other products made of Dixie yarns, also Dixie colors.
IN ATTENDANCE: B. J Frierson, A. K. Johnson, C. R. Ewing, P. D. Morrow, W. W. Logan, R. L. Voigt, Miss Mabel Nolan, G. M. Porges, T. J. Tighe, L. K. Hill, E. R. Kimball, G. S. Byran, W. C. Henderson, W. D. Evans, W. A. Eipper, Jr., F. W. Frank, G. W. Veness, P. H. Dalglish, M. M. Munsill, J. B. Cameron, and A. Cameron III.

DOBECKMUN CO., CLEVELAND, OHIO—(136, 137, 138, 120B)

DRAPER CORPORATION, HOPEDALE, MASS.—(225-230)
No Exhibit, space to serve as lounge area.
IN ATTENDANCE: Thomas H. West, William K. Child, Claude F. Snider, James H. Grant.

DUBIED MACHINERY CO., LONG ISLAND CITY, N. Y.—(272 to 274 incl.)
EXHIBIT: Type DRB and Type MR-M 20 Knitting Machines.
IN ATTENDANCE: John G. Sandri, Rudolf Singer, Ernest Hafner.

DU PONT DE NEMOURS & CO., INC., E. I., WILMINGTON, DEL.—(109 to 113, 124 to 128 incl.)

EASTERN YARN MILLS, INC., BROOKLYN, N. Y.—(218)

EASTHAMPTON RUBBER THREAD CO., EASTHAMPTON, MASS.—(90 to 93 incl.)

EASTMAN CHEMICAL PRODUCTS, INC., KINGSPORT, TENN.—(303, 304, 390, 310)
EXHIBIT: Fabrics knitted with Verel, including sweaters, interliners, blankets, men's sport shirts, T-shirts and dress fabrics. They will also feature new developments in Eastman acetate, such as their new "O" twist tube package; also fabrics containing Chromspun color-locked acetate fiber and Estron.
IN ATTENDANCE: Francis J. Ruddock, Ashton M. Tenney, Jr., Marshall L. Phelps, Harold Reebel, Robert Crawford, and Harry Smith.

EBERLY, INC., JOHN A., READING, PA.—(538, 539)
EXHIBIT: Knitting machine needles, sinkers, sliders, guides, etc. and specialty items for maintenance and production for textile mills.
IN ATTENDANCE: V. L. Eshelman, G. MacFayden, A. L. Eshelman.

EDLEY MACHINE CO., HIGH POINT, N. C.—(470 to 473 incl.)
EXHIBIT: Their Model RSVP pattern Mor-Pul knitting machine for socks, also their Model YMP for the production of regular Mor-Pul socks. Demonstration of the use of their Insertaform for packaging hosiery on cardboards.
IN ATTENDANCE: Ed Blankstein, O. R. York, Glenn Poole, Victor Rich, Red Coleman, Barry Farber.

EMSIG MANUFACTURING CO., NEW YORK, N. Y.—(102, 103)

ENGINEERED PLASTICS, INC., GIBSONVILLE, N. C.—(63)
EXHIBIT: Bobbins, spools, tubes, caps and specialties, as well as plastic coatings.
IN ATTENDANCE: D. M. Davidson, Jr., C. H. Phillips, Elmo Jones.

ERRICH INTERNATIONAL, NEW YORK, N. Y.—(552)
EXHIBIT: Their newly patented "Speedy" bag packager in several of its models.
IN ATTENDANCE: M. L. Ruderman, H. Bitterman, J. Miller, D. Mitchell and O. Roth.

ETHERINGTON BROTHERS, PHILADELPHIA, PA.—(433)
EXHIBIT: No display. Booth to serve as reception space.
IN ATTENDANCE: Burton H. Etherington, Jr., Frederick E. Etherington, Louis S. Ederer, Henry W. Swift, Robert T. Davis, John R. Crawford.

EVERETT SALES & EQUIPMENT CORP., NEW YORK, N. Y.—(449)

EWING-THOMAS CORP., CHESTER, PA.—(114, 115)
EXHIBIT: Combed and carded mercerized yarns for knitting and weaving—natural, dyed, bleached, gassed, Metro-Shade.
IN ATTENDANCE: James L. Rankin, Jesse W. Jester, George W. Fiss, Richard E. Rankin, David Thomas, II, Jacob F. Meschter, George E. White, Fred W. Crews.

FANCOURT CO., W. F., PHILADELPHIA, PA.—(515, 516)
EXHIBIT: Fabrics processed and finished with the following products: Vibralon, Nyaseal, Vibratol, Lanaseal, Reslon, Fantascour, Scourlon and Pentalon, and Fancosol.
IN ATTENDANCE: John Fancourt, Thomas Lindley, Robert Rhodes, Willard Sawyer, Claude G. Wolff.

FEUSTEL, INC., ERNEST A., LODI, N. J.—(501)

FIDELITY MACHINE CO., INC., PHILADELPHIA, PA.—(243 to 248 incl.)
EXHIBIT: Eight electronically controlled seamfree hosiery machines in operation; their new Model ATR, producing infants' hose with an automatically transferred rib top incorporating their new 10-end yarn selector and knot tyer.
IN ATTENDANCE: Lawrence Katz, Roy D. Faigenbaum, Leon Hill.

FIRESTONE INDUSTRIAL PRODUCTS CO., BOSTON, MASS.—(284, 285, 286)

FIRSCHING & SON, INC., J. A., UTICA, N. Y.—(282, 283)
EXHIBIT: Semi-automatic bias collarette cutting and winding machine, their combination strip cutting and winding machine, their automatic cuff cutting and folding machine, and their automatic lay-up machine.
IN ATTENDANCE: Robert A. Firsching.

FITCHBURG SPINNERS SALES CORP., FITCHBURG, MASS.—(143)

FLETCHER WORKS, INC., PHILADELPHIA, PA.—(191, 192)
EXHIBIT: Their new Master Duplex Doubler-Twister, their improved Speedex Winder-Redraw, and the Fletcher 30" Junior Extractor.

IN ATTENDANCE: Edward T. Taws, T. B. Baldridge, Jr., H. J. Roessel, Sr., H. J. Roessel, Jr., Frederick S. Claghorn, Harry B. Allison, F. W. Warrington.

FOSTER MACHINE CO., WESTFIELD, MASS.—(82, 83, 84, 99, 100, 101, 101AA)
EXHIBIT: Model 202 Automatic Cone Winder.
IN ATTENDANCE: W. C. Chisholm, E. C. Connor, H. W. Ball, P. H. Farmer, E. P. Dodge, C. B. Terry, H. E. Swift, J. B. Davenport, G. W. Mallory, F. F. Stange, C. P. Bullard, C. A. Faunce.

FRANKLIN PROCESS CO., PROVIDENCE, R. I.—(444, 445)
EXHIBIT: Package dyed yarn including cotton, Orlon, Helanca, nylon, Dacron, and rayon, also package-dyed Hi-Bulk Orlon and tow-dyed Orlon.
IN ATTENDANCE: W. F. Wolfe, C. W. Dawson, H. N. Graves, R. B. Lusignea, I. W. Cardner, R. S. Allen, M. E. Davis, C. E. McElwee, L. Grindrod, S. W. Cable, A. G. Dana, R. F. Strahley, H. O. Fry, R. C. McCarthy, D. M. Robinson, B. S. Phettoplace, J. R. Garner, E. T. Wrenn.

GARMENT FINISHING EQUIPMENT CORP., CAMBRIDGE, MASS.—(133, 134)
EXHIBIT: New Paris Sweater Finisher.

GEIGY DYESTUFFS, NEW YORK, N. Y.—(165)
EXHIBIT: Their display will be built around their durable mothproofing agent Mitin, and consist of a continuous showing of their film "Insects Astray", a "Motharium" showing live moths at work, and samples of knitwear treated with Mitin.
IN ATTENDANCE: Walter E. Bill.

GENERAL ELECTRIC CO., SCHENECTADY, N. Y.—(559)
EXHIBIT: Motors and Controls.

GINSBERG MACHINE CO., INC., NEW YORK, N. Y.—(266 to 269 incl.)

GLOBE DYE WORKS CO., PHILADELPHIA, PA.—(377, 378)
EXHIBIT: Package dyed cotton, worsted, zephyr, synthetic and blend yarns for the knitting trade, featuring Turbo and Hi-Bulk Orlon and Acrilan for the hosiery and sweater industries.
IN ATTENDANCE: H. T. Greenwood, Thomas S. Greenwood, William A. Hilbert, William B. Taylor, Richard W. Foltz, Fred V. Traut.

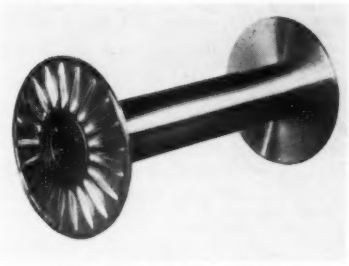
GROVE NYLON CO., SCRANTON, PA.—(331 to 334 incl.)
EXHIBIT: The various types of yarns produced by them.
IN ATTENDANCE: W. L. Schautz, A. G. Schautz, Dr. R. F. Stuewer, John Kalinowski, William T. Cheatham, Harry C. James, William C. Napier, Jr., Don M. Harshman, Robert W. Yeabsley, Robert F. Yeabsley.

HARDING, INC., H. C., PHILADELPHIA, PA.—(57, 58)

HARRIET-HENDERSON COTTON MILLS, HENDERSON, N. C.—(117 to 119 incl.)
EXHIBIT: Space to be used a reception booth.
IN ATTENDANCE: M. Y. Cooper, T. H. Crudup, Jr., D. O. Bievins, Walter C. Brown, P. H. Daiglish, Marcus Munsill, A. G. Sewell, D. F. Swain, Paul Sweetser.

HAYES INDUSTRIES, INC., JACKSON, MICHIGAN—(611)
EXHIBIT: Latest designs of their tricot beams in both standard and special sizes.
IN ATTENDANCE: George Barrie, William H. Maxson, R. D. Richards, Warren Sharp, John Prins, R. E. L. Holt, Jr. & Associates, Inc., J. Paul Laird.

HAYSSEN MANUFACTURING CO., SHEBOYGAN, WISCONSIN—(555, 556)
EXHIBIT: Their latest model hosiery wrapping machine in operation.
IN ATTENDANCE: R. P. Wilson, J. C. Johnston, Fred Koehn, Jim Willis, A. F. Perry, Jr.



HAYES—Tricot Beam for Nylon

HEANY INDUSTRIAL CERAMIC CORP., NEW HAVEN, CONN.—(19)
EXHIBIT: Heanium ceramic thread guides and tension devices.
IN ATTENDANCE: A. O. Pieper, Robert L. Carroll, R. B. Bennett.

HEMPHILL CO., PAWTUCKET, RHODE ISLAND—(250 to 253 incl., 252AA, 253A, 256 to 259 incl.)

HENRICI LAUNDRY MACHINERY CO., MATTAPAN, MASS.—(41)

HERR MANUFACTURING CO., INC., BUFFALO, N. Y.—(38, 39)
EXHIBIT: Their conical rings and holders for spinning and twisting frames, also flyers constructed for each mill condition.
IN ATTENDANCE: Hyatt B. Atwood, Robert M. Leach, William W. Woodard, James McLean.

HESS, GOLDSMITH & CO., INC., ATWATER DIVISION, PLYMOUTH, PA.—(75)
EXHIBIT: Fabrics, garments and yarns of Ban-Lon, Taslan, Flufton, Helanca SW, and other bulked and stretch type yarns; also a sample warp spool.
IN ATTENDANCE: E. J. Schellenberg, E. J. Schellenberg, Jr., R. P. Schellenberg, S. D. Counterman, Clayton Jones, William O'Neill.

HOFFNER RAYON CO., PHILADELPHIA, PA.—(456, 457)
EXHIBIT: Filament and spun synthetic yarns, dyed and thrown.
IN ATTENDANCE: Joseph C. Hoffner, John G. Hoffner, James M. Hoffner, Charles P. Hoffner, Laurence H. Hoffner, Lewis A. Oechslin, C. Richard Byran.

HOFMANN & CO., ALFRED, WEST NEW YORK, N. J.—(341, 342, 349, 350)
EXHIBIT: Optical testing instrument Projectina; working model of tenter frame by Trockentechnik Brueckner; and working models of Erhardt & Leimer fabric guiders, selvage feelers, feeding devices for tenter frames, and selvage uncurlers.
IN ATTENDANCE: C. A. Hepp, P. Schoenster, H. Peter, A. A. Brenner.

HOFMANN NEEDLE WORKS, INC., ALFRED, UNION CITY, N. J.—(355-56, 363-64)
EXHIBIT: No display, space to serve as reception booth.
IN ATTENDANCE: C. A. Hepp, Richard Eppler, Hanns L. Wirth, Arthur W. Bachman, George C. Graves, Charles B. Paulus, George W. Veness; from Groz-Beckert Nadelfabriken, Germany: Erich Groz, Dr. Carl Foehl, Ian M. Haldane.

HOHENBERG CO., INC., NEW YORK, N. Y.—(48)
EXHIBIT: Samples of various yarns for the knitted outerwear as well as the hosiery industry, consisting of natural fibers and blands of synthetic fiber blends, spun both on the woolen and on the worsted knitting system.
IN ATTENDANCE: Otto Hohenberg, Bernard Hohenberg, Neil Miller.

HOOKER & SANDERS CORP., NEW YORK, N. Y.—(395, 396)
EXHIBIT: Cotton yarns-servicing techniques.
IN ATTENDANCE: Joseph P. Sanders, Morgan E. Roper, Martin Gould.

HOSIERY & UNDERWEAR REVIEW, NEW YORK, N. Y.—(51, 52)

HOWES PUBLISHING CO., INC., NEW YORK, N. Y.—(211, 212)

INDIAN ORCHARD FINISHING CO., INDIAN ORCHARD, MASS.—(116)

INDUSTRIAL DRYER CORP., STAMFORD, CONN.—(151, 152)
EXHIBIT: Latest type "H-W" Conditioner, arranged to automatically pre-heat, condition, exhaust or dry.
IN ATTENDANCE: Philip H. Friend, Richard G. Leininger, Jesse R. Tutt, F. W. Caesar.

INTERNATIONAL SILK ASSOCIATION, NEW YORK, N. Y.—(348)
EXHIBIT: Knitted fabrics and garments made of silk and silk blends.
IN ATTENDANCE: George Elbogen, Alvin Barber, Siegfried F. Brand.

INTERSTATE YARN MILLS, INC., NORTH BERGEN, N. J.—(431, 432)
EXHIBIT: Various types of novelty twist yarns of natural and synthetic fibers, also dyed rayon yarns, including space-dyed yarns.
IN ATTENDANCE: Louis Ginsberg, Arthur E. Siegal, Jack Albert, Sam Kimmel.

IVES CO., INC., LOYAL T., NEW BRUNSWICK, N. J.—(344, 345)
EXHIBIT: Animated display showing types of sinkers, jacks, spring beard needles, guides and other operating parts used in knitting machines.
IN ATTENDANCE: Theo. Whitlock, Theo. Whitlock, Jr., Charles S. Lydecker.

J & H LABEL PROCESSING CORP., MAYWOOD, N. J.—(385)
EXHIBIT: Pre-processed garment components; also demonstration of electro-seal garment labeling on their new labeling machine.
IN ATTENDANCE: Clifford Jordan, Gordon Cunningham.

JACQUARD KNITTING MACHINE CO., INC., PHILADELPHIA, PA.—(225 to 230 incl.)

JOHNSTON MILLS CO., CHARLOTTE, N. C.—(540, 541)
EXHIBIT: Combed, carded, and Durene yarns in natural, bleached and dyed.
IN ATTENDANCE: David R. Johnston, Donald R. Jonas, R. M. Bechtel, F. N. Belk, W. J. Crummer, J. W. Ferguson, E. E. Jones, Jr., A. R. Newcombe, Jr., W. B. Phelps, Jr., E. M. Peacock, W. J. Yates.

JORDAN MILLS, INC., COLUMBUS, GEORGIA—(120, 120A)
EXHIBIT: Articles of wearing apparel made from Orlon, Acrilan and blends.
IN ATTENDANCE: R. Curtis Jordan, Jr., W. A. Livingston, Robert W. Boyd.

K AND J TRADING CORP., JAMAICA, N. Y.—(207 to 210 incl.)
EXHIBIT: Philip Multi-Feed Automatic Interlock Machine.
IN ATTENDANCE: Morris Kaplan and Philip Belaief.

KAHN & FELDMAN, INC., NEW YORK, N. Y.—(419, 420, 429, 430)

KAUMAGRAPH CO., WILMINGTON, DEL.—(549, 550, 551)
EXHIBIT: Their decorative process transfers, lithographed and gravure printed wraps, bands, riders, tissues, Prestomark labels, and seals; new Presto-Loc folding cartons.
IN ATTENDANCE: F. T. Marston, B. P. Lindley, A. J. Geiringer, D. V. Woods, J. L. Reeves, C. C. Cobb, V. G. Stanton, W. P. Raiford, W. C. Marden, J. A. Martin.

KEYSTONE DYEING CO., INC., PHILADELPHIA, PA.—(504)
EXHIBIT: Newest techniques for dyeing and finishing synthetic knitted piece goods and full-fashioned sweaters.
IN ATTENDANCE: Frank P. Murphy, Henry Kline.

KIDDE MANUFACTURING CO., INC., BLOOMFIELD, N. J.—(489, 490, 491, 496, 497, 498)
EXHIBIT: Knitting machines, compensating tensions for circular knitting, 21" tricot warper.
IN ATTENDANCE: W. J. Behr, Jr., John Fleming, H. W. Ruddick, Kurt Kaak, C. E. Glover, E. L. Herbert.

KIMBALL CO., NEW YORK, N. Y.—(399)
EXHIBIT: Model 40 price marking machine and Model 75 punch marking machine.
IN ATTENDANCE: W. O. Hopley, D. H. Ferber, F. N. Brady, H. C. Fryer, D. D. O'Brien, J. H. Kremer.

KLAUDER-WELDON-GILES MACHINE CO., PHILADELPHIA, PA.—(54)

KLUMPP CO., JOSEPH, PHILADELPHIA, PA.—(503)
EXHIBIT: Carded, combed, Durene cotton and combination novelty twists, decoration and specialty yarns.
IN ATTENDANCE: J. J. Klumpp, G. L. Vonder Lindt, Wallace Gill, Jr., S. Scott Stewart, William J. Kane, Carl H. Beitel, C. H. W. Mandeville, Jr.

KNITTER, THE, CHARLOTTE, N. C.—(514)

KNITTING MACHINE & SUPPLY CO., NEW YORK, N. Y.—(80, 81)
EXHIBIT: Three automatic flat power knitting machines, manufactured by H. Stoll & Co., Reutlingen, Germany.
IN ATTENDANCE: Ernst Marthaler, Allen D. Van Anda, Heinz Fleck.

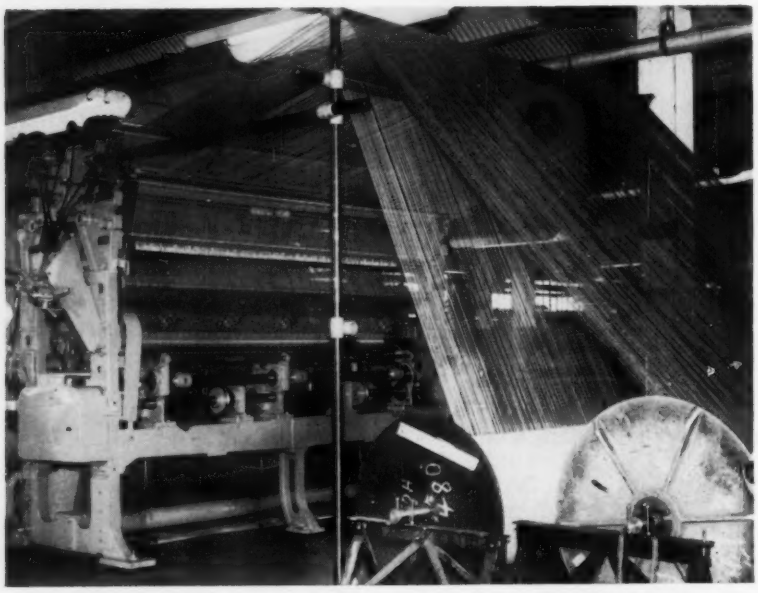
KRUSE & SLATTERY, INC., CAMDEN, N. J.—(44)
EXHIBIT: Full-fashioned hosiery machine supplies; sinker heads.
IN ATTENDANCE: J. T. Thomas, J. J. Slattery, Jr.

LACONIA-COOPER CO., INC., LACONIA, N. H.—(455, 484)
EXHIBIT: Latch needles and spring beard needles.
IN ATTENDANCE: Howard Bacon, Guy Dawson, Charles E. Gamper, Bruce Lauderback, Kenneth Lingley, George A. Parsons.

LA MODE HOSIERY CORP., HOLLYWOOD, FLA.—(439-440)
EXHIBIT: Four Santoni (Italy) knitting machines.
IN ATTENDANCE: John Klein, Jack Siegel; from Santoni: P. G. Vincoli, Aldo Vincoli, E. Baldau and S. Szulc.

LASSITER CORP., CHARLOTTE, N. C.—(357 to 362 incl.)
EXHIBIT: Examples of packaging for hosiery, underwear and other knit goods, including flexible films, box wraps, folders, folding boxes and tissues.
IN ATTENDANCE: John V. Shea, W. B. Wine, H. C. Wall, R. W. Plover, M. R. Smilow, R. E. Cushing, J. C. Tiddy.

LATTA, CURRIER CO., INC., NEW YORK, N. Y.—(74)
EXHIBIT: Samples of cotton, Orlon and nylon yarns; Ban-Lon processed and other textured yarns; also products and garments manufactured from these yarns.
IN ATTENDANCE: Albert W. Latta, Jr., Arthur M. Currier, William F. Durkin, William L. Huggins, III, Edwin Malloy, L. E. Rudisill, Dan La Far, John Moore, Ernest Hunter.



LIEBERKNECHT—Raschel Machine for Upholstery and Carpet Pile Fabrics

LAUREL SOAP MANUFACTURING CO., INC., PHILADELPHIA, PA.—(547, 548)
EXHIBIT: Their line of soaps, oils and finishes for the knitting trade, including lubricating and conditioning emulsions and winder trough solutions, coning oils, sizes for hosiery yarns, etc. and complete line of package dyeing assistants and finishes.
IN ATTENDANCE: Clarence E. Bertolet, William H. Bertolet, Jr., A. Henry Gaede, Fowler Jackson, William H. Bertolet, III, Thomas C. Holst, B. N. Peterson, J. Paul McGinty, Albert H. Rant.

LEATEX CHEMICAL CO., PHILADELPHIA, PA.—(3, 4)

LEGGE, PERCY A., BOSTON, MASS.—(284, 285, 286)
EXHIBIT: Yarns and rubber threads of the following firms, represented by them: Allendale Co., Centredale, R. I.; Argonne Worsted Co., Woonsocket, R. I.; Firestone Industrial Products Co., Fall River, Mass.; and Paul Whitin Manufacturing Co., Gilbertville, Mass.
IN ATTENDANCE: C. E. Neeld, Jr., Webster Smith, Richard Rosenfeld, Richard Condon, T. W. Adams, W. H. Brewer, Lawrence Wagoner. Also from Allendale, C. B. Rockwell and Ivory Littlefield, Jr.; from Argonne, Marcel Dursin, Maurice Dursin and Louis Dursin; from Firestone, R. J. Mitchell, Frank Armitage, Henry Stawniak, and T. J. Gracia; from Whitin, Harry T. Whitin and C. E. Adams, Jr.

LEON-FERENBACH, INC., NEW YORK, N. Y.—(381)
EXHIBIT: Their nylon, silk and rayon yarns, including Leferon, Dyna-Loft, Helenca, Agilon, and bulked yarn and products made from these yarns.
IN ATTENDANCE: Carl Ferenbach Gregory Ferenbach, R. S. Farenbach, R. W. Boyd, C. W. Wolcott, R. L. Wise.

LIBERTY THROWING CO., INC., KINGSTON, PA.—(262, 263)

LIEBERKNECHT, INC., KARL, READING, PA.—(391 to 394 incl.)
EXHIBIT: Pictorial display of their new automatic non-stop hosiery knitting machine and their new carpet knitting machine; also samples of carpeting made on this machine.
IN ATTENDANCE: L. C. Milliken, C. A. Friedmann, George B. Groh, John Renger, Rudolph Thierfelder, Eugene Zesch, Charles Bilder, Hans Koehler, Martin E. Radvanyi.

LINDLY & CO., INC., MINEOLA, L. I., N. Y.—(50)
EXHIBIT: Their automatic yarn inspectors and photo-scanner.
IN ATTENDANCE: Thomas Fox, Charles Elgin, Vincent Lynch.

McBRIDE CO., INC., EDWARD J., PHILADELPHIA, PA.—(29, 30)

MALINA CO., NEW YORK, N. Y.—(327 to 329 incl.)
EXHIBIT: Natural rayon, nylon and acetate yarns in all forms and put-ups; also metallic yarns, both supported and unsupported, in cellophane, butyrate and mylar.
IN ATTENDANCE: Louis Malina, Fred H. Diamond, Fred Malina, Arthur Malina, J. J. Richrath, Roy Westland, Earle Taber, E. K. Woods, Harry Calder, Bob Meltzer, Jack Gutcheon.

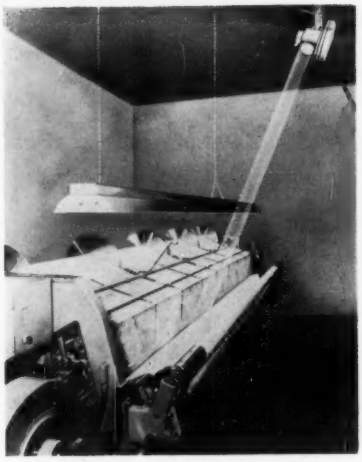
MARKEM MACHINE CO., KEENE, N. H.—(295, 296)
EXHIBIT: Marking machines; label printing equipment; also movies of their machines in operation and display of printed samples.
IN ATTENDANCE: David Putnam, Thomas Huggins, Charles Cheeseman, Arthur McNaughton.

MARLEY DISTRIBUTING CO., INC., NEW YORK, N. Y.—(164A)

MARVEL SPECIALTY CO., INC., PADUCAH, KY.—(277 to 279 incl.)
EXHIBIT: Marvel mending machine, marvelmeter for counting courses in knitted fabrics, and Marvel-X, for turning and inspecting infants' and men's hose.
IN ATTENDANCE: Grayson Harralson, Gus T. Smith, Charles G. Newton, Lewis T. Ballard, Hubert Hurley, Carl McAnally.

MASUREL MILLS, WOONSOCKET, R. I.—(502)
EXHIBIT: Spun yarns from natural, and synthetic fibers, straight or blended; Turbo processed yarns, natural and tow dyed; Ban-Lon textured filament yarns; novelty twisted yarns; imported French yarns.
IN ATTENDANCE: Robert E. Boyaval, Bert G. Bouthilette, Jack Smolin, Maurice E. Messier, John Purdy.

MAYER TEXTILE MACHINERY CORP., WEST NEW YORK, N. J.—(186 to 189 Incl.)



LINDLY—Automatic Photo Scanner

EXHIBIT: Their Super-Rapid 2 & 3 Bar Tricot Machine; Super-Rapid 4 Bar Tricot Machine; and Super Garant 12 Bar Raschel Machine.
IN ATTENDANCE: Helmut Nittmann, Nat Brody.

MEESE, INC., MADISON, IND.—(343)

MERROW MACHINE CO., HARTFORD, CONN.—(264, 265, 270, 271)
EXHIBIT: Their Class M Overstitching Machines, also machines for overedging, overseaming, shirring, hemming and other sewing operations; Class A Overstitching Machines and Crochet and Shell Stitch Machines.
IN ATTENDANCE: John M. Washburn, William M. Baker, George B. Armstead, Jack Washburn, Clyde W. Davis.

METLON CORP., NEW YORK, N. Y.—(437)
EXHIBIT: Metlon non-tarnishing metallic yarns, Metlon with Mylar, and combinations with all types of natural and synthetic fibers.
IN ATTENDANCE: Arthur C. Brucks, Ted Katoff, Karl H. Inderfurth, Will Plowden.

MEYERS & CO., CLARENCE L., PHILADELPHIA, PA.—(305 to 308 incl.)
EXHIBIT: Samples of their new yarns "Myon", "Mylast", "Nytrim" and "Datrim", as well as silk and mercerized lisle combination yarns.
IN ATTENDANCE: Clarence L. Meyers, Milton M. Meyers, James A. Meyers, Gordon E. Meyers, Edward N. Myers, Charles E. Bender, Ernest W. Fowler, Louis Eschelbach, Harry W. Schrader, Daniel Strauss.

MILLER WRAPPING & SEALING MACHINE CO., CHICAGO, ILL.—(121-123)
(see Amsco Packaging Machinery Co.)

MILTON MACHINE WORKS, INC., MILTON, PA.—(335)
EXHIBIT: Aluminum alloy tricot beams equipped with forged heads.
IN ATTENDANCE: J. Stanley Billig, W. DeWitt Leinbach, Charles J. Anchor, George W. Blunt.

MODERN TEXTILES MAGAZINE, NEW YORK, N. Y.—(78, 79)

MOHAWK BUTTON CO., INC., NEW YORK, N. Y.—(37A)
EXHIBIT: Mohawk-Merit automatic shank button feeder and display of plastic buttons.
IN ATTENDANCE: Alfred Moses.

MONARCH MARKING SYSTEM CO., DAYTON, OHIO—(330)
EXHIBIT: Marking machines in various models, also their Model 300 "Tickopres" which imprints information for box end labels, production tags and similar items.
IN ATTENDANCE: John A. West, Sam Jordan, Chuck Huckins, Jr., Arthur Clark.

MULLER & CO., L. P., PHILADELPHIA, PA.—(466, 467)
EXHIBIT: No display. Booth to be used as reception center.
IN ATTENDANCE: H. D. Muller, H. G. Harper, J. M. Matlack, J. T. Hawthorne, F. H. Ward, T. H. Nicholson, T. C. Brown, Tom Dove, III, R. A. Eldridge, W. C. Muller, H. R. Peck, E. O. Penington, H. R. Penington, A. B. Reid, W. J. Scott, H. E. Protzmann.

NARROW FABRIC CO., READING, PA.—(401, 402, 407, 408)
EXHIBIT: Elastic and trimmings suitable for the underwear, hosiery and related trades.
IN ATTENDANCE: S. R. Fry, J. W. Sweeney, Thomas M. Fry, George Dudley, Jr., F. S. Pierce, S. S. MacCallum, W. S. Towson, K. R. Lieb, C. E. Gray, H. V. Vernet, Jr., A. A. Willus, O. A. Kemp, C. H. James.

NATIONAL BUNDLE TYER CO., BLISSFIELD, MICH.—(384)

NEW YORK PRESSING MACHINERY CORP., NEW YORK, N. Y.—(423, 424)
EXHIBIT: Automatic steaming and drying machine, steam blocking machine, steam pressing machine, and utility press, all in operation.
IN ATTENDANCE: H. E. Cole, S. Berl, M. Lachs, M. Puretz, A. Puretz.

O'BRIEN, RICHARD C., PHILADELPHIA, PA.—(293, 294)
EXHIBIT: Yarns and products made from such yarns of the following companies: The Aldon Spinning Mills Corp., Talcottville, Conn.; Aldon Yarns, Inc., Manchester, Conn.; Belmont Yarn Mills Corp., Woonsocket, R. I.; The Duplan Corp., Winston-Salem, N. C.; Palmetto Worsted Mills, Laurens, S. C.; Stanley Mills, Greensboro, N. C.; and Woonsocket Laurens Corp., Laurens, S. C.
IN ATTENDANCE: Richard C. O'Brien, Arthur J. Moher, C. J. McAlaine, William C. Schmidt, E. L. Merritt, Jr., George Richardson, Arthur K. Moher, H. Meade Freeman, Jr., Ken MacKay, B. G. Collingwood, J. S. Persinger.

ORDNANCE GAUGE CO., PHILADELPHIA, PA.—(199, 200, 201)

PANAMERICAN PUBLISHING CO., NEW YORK, N. Y.—(468, 469)

PARAMOUNT TEXTILE MACHINERY CO., CHICAGO, ILL.—(313, 314, 323 to 326 incl.)
EXHIBIT: Paramark Model 12 transfer machine; Convamatic boarding machine; automatic carriage and form actuator for horizontal retorts; and boarding and preboarding forms.
IN ATTENDANCE: Henry Pope, Jr., William Pope, John C. Fenley, C. R. Scheuring, W. H. Albertson, L. J. Albertson, L. D. Ross, O. A. Siegel, W. E. Pike, H. N. Campbell, W. H. Brown, Frances Snogren.

PERNICK CO., INC., JOSEPH, MASPETH, L. I., N. Y.—(336, 337)
EXHIBIT: Aero-dyne dryer; measuring and examining machine; knitgoods calender for finishing all types of tubular knitgoods; and gumming and slitting machine for tubular knitgoods.
IN ATTENDANCE: Louis Pernick, David Pernick, David Haft, Mark Pernick.

PHILADELPHIA METAL DRYING FORM, INC., PHILADELPHIA, PA.—(374)
EXHIBIT: Hosiery finishing equipment, such as steam heated boarding forms, electrically heated boarded forms, and preboarding equipment.
IN ATTENDANCE: Arthur H. Johnson, Thomas P. Flanagan, Barton B. Johnson.

LINDLY—Automatic Yarn Inspector

PROCTOR & SCHWARTZ, INC., PHILADELPHIA, PA.—(557, 558, 565, 566)
EXHIBIT: They will display photographs and models of their equipment and show sound color motion pictures of such equipment in actual mill operation. The following equipment will be featured: Proctor continuous bleach range, Proctor loop dryer, Proctor electrocolorset machine; the Redman process for shrinkage control of tubular knit goods will be shown on film.
IN ATTENDANCE: William H. Poole, Denver D. Cunningham, Charles W. Allen, Allen Bickel.

QUEENS MACHINE CO., BROOKLYN, N. Y.—(205-206)

REECE CORP., WALTHAM, MASS.—(427, 428)

REINER, INC., ROBERT, WEEHAWKEN, N. J.—(69 to 73 incl.)
EXHIBIT: Model of "Famatex" tenter frame, Schaffhausen rib machine, and heavy duty HSW sectional warper.
IN ATTENDANCE: Karl T. Marx, Walter Horn, John A. Vollmann, William Whary, Joachim Koegler, Dieter Scheube.

RELIANCE ELECTRIC & ENGINEERING CO., CLEVELAND, OHIO—(35, 36)
EXHIBIT: Reliance V S Jr. variable speed electronic drive, Reliance corrosion-proof A-c. motor, Reeves Vari-Speed Motodrive, and Reeves variable-speed motor pulley.
IN ATTENDANCE: P. Talbot, K. S. Lord, A. W. Bridges, J. Mahoney, G. Miller, E. H. Sowers, L. W. Kutz, H. B. Moore, K. Miller, S. King, M. H. Phelps.

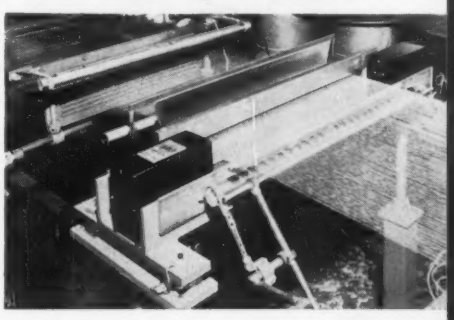
REVCO, INC., MINNEAPOLIS, MINN.—(141)
EXHIBIT: Various models of their Zero-Max variable speed reducers and control devices.
IN ATTENDANCE: Richard A. Hersey, Leo J. Cross, Alex Benzemann.

RICHMOND OIL, SOAP & CHEMICAL CO., INC., PHILADELPHIA, PA.—(202)
EXHIBIT: Chemical specialties for the textile trade.
IN ATTENDANCE: William Alkus, Morton W. Levi, John W. Schenkel.

ROBISON RAYON COMPANY, INC., PAWTUCKET, R. I.—(509)
EXHIBIT: Cake dyed rayon, package dyed bouclé, chenille and bouclé yarns for knitters, novelty yarns for draperies and upholstery, and decorations for woolens and worsteds.
IN ATTENDANCE: Raymond G. Franks, Herbert S. Robison, J. Everett Murphy, Charles P. Doonan, Franklin A. Nordon, Carl N. Peterson, Steven M. Robison.

ROCHESTER BUTTON CO., NEW YORK, N. Y.—(45)
EXHIBIT: Their new Speed-Feed shank button feeding machine, also some new button lines.
IN ATTENDANCE: Bernard Popkin, MacKay Shantz, Gunther Scheibert.

ROSE PATCH & LABEL CO., GRAND RAPIDS, MICH.—(443)
EXHIBIT: Printed vat dye labels used on



underwear, also demonstration of a machine for cutting and folding fabric labels.
IN ATTENDANCE: Lloyd E. Cook, William J. Chaille, Howard J. Schuitema, Daryl S. Kingsnorth, Don F. Rouse, Russell F. Hathaway, John M. Carroll, Jones Y. Pharr, Jr.

ROTHKOPF & CO., INC., BROOKLYN, N. Y.—(46, 47)
EXHIBIT: Jacquard flat and border machines of Servo-Stop Machines, Roanne, France; Sweater looper and hosiery looper of John W. Hepworth & Co., Inc.; other products such as Pike Flash-O-Lens, Knitmaster stitch gauge, McRoth slitter, tensitron tension meter, and others.
IN ATTENDANCE: Mac M. Rothkopf, Gene Alan Rothkopf, Abe Rothkopf, Bertram Lee Rothkopf, Ernest C. Schwass.

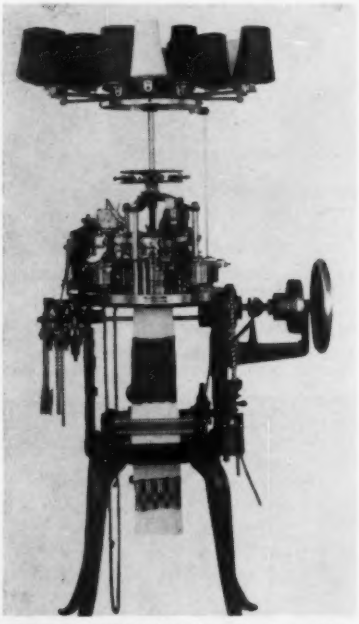
ROYERSFORD NEEDLE WORKS, INC., ROYERSFORD, PA.—(461, 467)
EXHIBIT: Full-fashioned needles and needles for the sweater industry, sinkers, points, strap hooks, etc.: also products of the Bard Manufacturing Co. Division, such as machined parts, bushings, pins, bolts, etc.
IN ATTENDANCE: Fred Heller, Robert B. Schindler, Richard Breidenbach.

SACHS CO., NEW YORK, N. Y.—(338)
EXHIBIT: Novelty warp knit trimmings and fabrics.
IN ATTENDANCE: Arthur L. Miller, Irwin H. Mur.

SAUQUOIT SILK CO., INC., SCRANTON, PA.—(382, 383)

SCHOLLER BROTHERS, INC., PHILADELPHIA, PA.—(463, 464, 465, 474, 475, 476)
EXHIBIT: Dura Beau and lanolized finishes for conventional and stretch stockings, and knitted fabrics.
IN ATTENDANCE: E. S. Atkinson, J. F. Noble, J. O. Sweitzer, L. M. Boyd, C. H. Schuettler, W. R. Sargent, W. S. Truette, E. J. Fitzerald, Jr., D. E. Robertson, A. T. Glenn.

SCOTT TESTERS, INC., PROVIDENCE, R. I.—(297, 298)



SCOTT & WILLIAMS—Machine for making Toques

EXHIBIT: The following four machines will be in operation: IP-4 Inclineplane Tensile Tester with several types of clamp equipment; Scott-Clemson Flat Bundle Fiber Tester; Scott Twist Counter; and their Model X-5, an inexpensive tensile tester for yarn and thread.
IN ATTENDANCE: Factory personnel.

SCOTT & WILLIAMS, INC., NEW YORK, N. Y.—(231 to 242 incl., 231A, 238A, 239A)
EXHIBIT: Twenty-one circular knitting machines, incorporating recently developed attachments and improved mechanical features, for the manufacture of hosiery, underwear, foundation garments, swim wear, sweaters, toques and fabrics, together with a complete line of samples which can be produced on this equipment.
IN ATTENDANCE: B. J. Faucette, W. O. McMillan, H. G. Kellett, F. H. Hallenbeck, J. S. Hubbard, A. W. Nealley, J. G. Schmidt, W. E. Chaput, W. D. Ide, D. B. Brinton, R. W. Bennett, P. P. Chaput, J. R. Seymour, W. V. Shenk, S. P. Sayewich, F. W. Smith, F. W. Wakefield, J. Woodburn, D. MacIntyre, F. C. Summerlin, R. Poire, L. C. Evans, G. Sinclair, T. Shastany, L. Wilkie, M. Felkner, H. Tate.

SCOVILLE MANUFACTURING CO., WATERBURY, CONN.—(436)
EXHIBIT: Their "Gripper" snap fastener.
IN ATTENDANCE: John P. McDonnell, E. D. Janes, E. F. Anderson, P. E. Fenton, G. K. Thornton, E. F. Dillon, F. T. Lord, Jr., E. R. Duchesne, John McAteer, Chris Poulsen, W. R. Spearrin, A. J. Lees, H. David Ward, D. W. Copeland, R. W. Hall.

SELLERS MANUFACTURING CO., SAXAPAHAW, N. C.—(104, 105)
EXHIBIT: Knitting yarns of all descriptions.
IN ATTENDANCE: B. E. Jordan, Sr., B. E. Jordan, Jr., Frank Longcrier, A. B. Smith, J. M. Neel.

SERVO STOP, ROANNE, FRANCE—(49)
EXHIBIT: see under Rothkopf & Co.
IN ATTENDANCE: Robert Steiger.

SHELL OIL CO., NEW YORK, N. Y.—(346, 347)

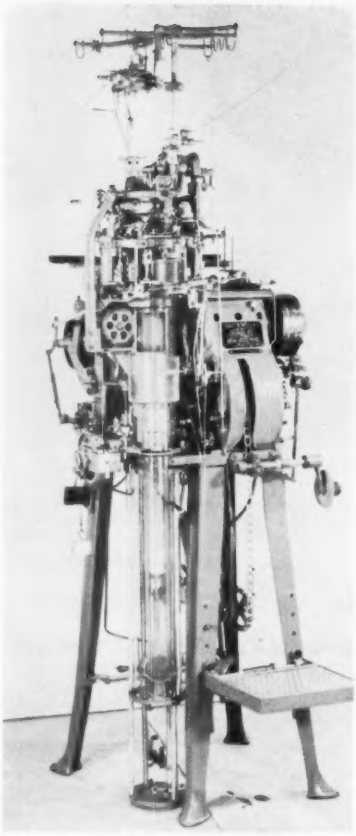
SIMPLEX PACKAGING MACHINERY, INC., LONG ISLAND CITY, N. Y.—(121, 122, 123)

SINGER SEWING MACHINE CO., NEW YORK, N. Y.—(289, 290, 299, 300)
EXHIBIT: Several of its latest high production type sewing machines and allied equipment.
IN ATTENDANCE: E. L. Ching, J. E. Wertz, W. Ketcham, C. H. Leidig, P. R. Mohney, C. A. Stevens, L. R. Peak, R. Criqui, J. Crossin, A. Shenusky, and J. Santella.

SMITH, DRUM, & CO., PHILADELPHIA, PA.—(129 to 132 incl.)
EXHIBIT: High temperature package dyeing machine, package yarn carrier with miscellaneous packages, laboratory model package dyeing machine, paddle dyeing machine for knit goods processing, rotary type dyeing machine for hosiery, and skein dyeing machine for Hi-Bulk yarns and others.
IN ATTENDANCE: Robert N. Smith, Albert Bagian, Albert P. March, William A. Fuchswanz, Parrott and Ballentine.

SOABAR CO., PHILADELPHIA, PA.—(82A)

SONOCO PRODUCTS CO., HARTSVILLE, S. C.—(507, 508)
EXHIBIT: Paper cones, tubes, spools and cores; Plastic spools and rings; Plastic and Fiber spools and pirns; Molded Fiber cheese cores and slip sleeves; and Synthetic Rubber cots and roll covering.
IN ATTENDANCE: C. H. Campbell, C. W. White, H. M. Adams, W. B. Broadbent, C. L. Burnham, B. H. Biggs, W. M. Carpenter, E. J. Cotter, W. J. Durkin, O. D. Duckett, O. F. Fayne, W. R. Gray, Charles Harper, R. B. Henderson, J. W. Hillsgrove, H. P. LaMarche, G. K. Lewis, W. K. Lewis, Jr., W. P. Peacock, P. F. Williams, J. A. Reagan, Jr.



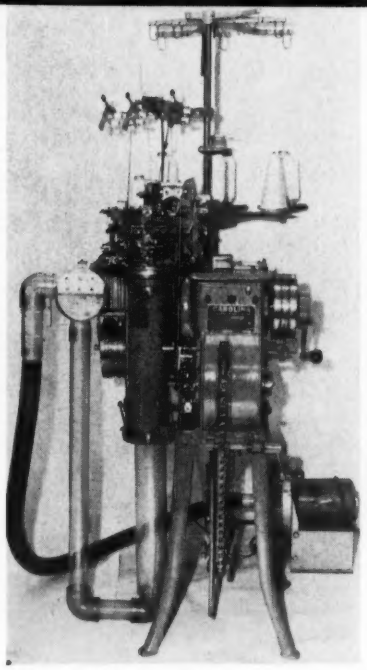
SCOTT & WILLIAMS—Model KN with Grab Take-up

SOUTHERN TEXTILE MACHINERY CO., PADUCAH, KY.—(275, 276, 287, 288)
EXHIBIT: Various models of their Sotco inspection machines for ladies hosiery; their Model P looper for outerwear featuring new yarn tensioning device; looper lights, tables, stands and other looping accessories.
IN ATTENDANCE: T. A. Paxton, R. N. Parkin, Billy Bryan, Russell Smith, Aubrey George.

SOUTHERN TEXTILE NEWS, CHARLOTTE, N. C.—(211A)

SPECIALTY MANUFACTURERS & SALES CO., ACWORTH, GA.—(560, 561, 562, 563)
EXHIBIT: Their Inspectomatic hosiery inspection form, turner and stacker, featuring several new attachments; an automatic cuffer; a new design of their pneumatic hosiery turner; and a new type boarding machine manufactured by Heliot of Troyes, France.
IN ATTENDANCE: John W. Glaze, Jr., Joseph Kienel, Terence Parry, Henry May.

SPEIZMAN CO., MORRIS, CHARLOTTE, N. C.—(170 to 177 incl.)
EXHIBIT: Bowman automatic transfer applying machine; Carolina 2-Feed ladies seamless hose knitter; and "Somco" pre/post boarding machine.
IN ATTENDANCE: Morris Speizman, Ted Valenstein, M. P. Deleo, J. H. Barnes, A. C. Gregg.

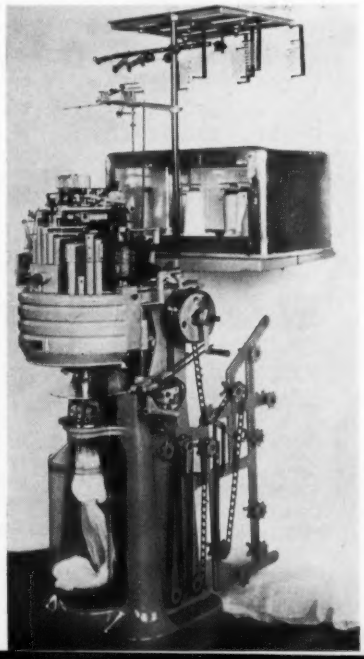


SPEITZMAN—Carolina 2-Feed Seamless Hose Knitter

STAMPAGRAPH CO., INC., BRONX, N. Y.—(147)
EXHIBIT: Hot iron transfers for marking hosiery and underwear; embossed seals and labels and other materials for marking and labeling of knit goods.
IN ATTENDANCE: George H. Chadwick, Carl Weilbacher, B. Chadwick, E. Weilbacher.

STANDARD-COOSA-THATCHER CO., CHATTANOOGA, TENN.—(317 to 320 incl.)
EXHIBIT: Industrial sewing thread and mercerized cotton yarns.
IN ATTENDANCE: Freeman R. Harris, R. C. Thatcher, Jr., Emil S. Davis, D. Brooks Barlow, W. S. Lawson, William M. Hall, James H. Clarke, Joe Patrick, J. O. Foil, Muir Lyon, W. T. Warmath, James M. Smith, Robert Miller, R. Dan Pullem, Robert Swan.

STANDARD YARN MILLS, GLENDALE, N. Y.—(190)
EXHIBIT: Their metallic yarns Lamé and Lamé with Mylar; knitted and woven fabrics with Lamé non-tarnishable yarns.
IN ATTENDANCE: Henry Rosenblatt, Alvin Nadel, E. H. Ellis, Harry James.



STANFORD MARLEY DISTRIBUTING CO., INC., NEW YORK, N. Y.—(164A)
EXHIBIT: Various types of mending equipment.
IN ATTENDANCE: Stanford Marley.

STAROBA INDUSTRIAL RESEARCH CO., LTD., TORONTO, CANADA—(379, 380)
EXHIBIT: Circular knitting machine Model MD-400 for seamless hose; "Universal" circular knitting machine for ladies knee-high seamless hose; and automatic shuttleless jet loom Model P-45.
IN ATTENDANCE: R. V. Smith, Tom Wilkinson, Stela Staroba.

STEEL HEDDLE MANUFACTURING CO., PHILADELPHIA, PA.—(553)
EXHIBIT: They will display only one product line, namely their Gyrotex line of throwing bobbins for use with the synthetic yarns.
IN ATTENDANCE: Tom C. Jackson.

STEELE CANVAS BASKET CO., INC., CAMBRIDGE, MASS.—(40)
EXHIBIT: Canvas baskets, trucks, hampers and specialties.
IN ATTENDANCE: Albert E. Pratley, Gordan L. Whynaught.

STEINBERG BROTHERS, STONEHILL KNITTING MACHINES CORP., BROOKLYN, N. Y.—(203, 204)
EXHIBIT: Various models of Universal flat knitting machines and Stonehill cloth slitting machine.
IN ATTENDANCE: Herbert Steinberg, Julius Steinberg.

STERLING ENGINEERING & MFG. CO., WILKES-BARRE, PA.—(149)
EXHIBIT: Self-stacking boards for handling bobbins, cones, tubes, quills, etc.; also yarn handling trucks.
IN ATTENDANCE: George McGee.

STOP-MOTION DEVICES CORP., BROOKLYN, N. Y.—(193 to 198 incl.)
EXHIBIT: Stop-motions for knitting and sewing machines; press-off and rib hole detectors; Tensolator tension assemblies; knot and end detectors; and retractible electric needle protectors.
IN ATTENDANCE: N. J. Tellerman, Gordon Connors, Bill Chaplin, Fred Weston, Edward Vossen.

SUPREME KNITTING MACHINE CO., INC., OZONE PARK, N. Y.—(451, 454, 485, 488)
EXHIBIT: The following new machines: Model SAI/PP for variable striped and patterned rib fabrics; Model ROF/T for patterned back tie-in fleece fabrics; Model MLV/N for all-over loop cloth as well as patterned loop fabrics. In addition they will show their Model SAAF/C automatic striping machine for striped, patterned or plain jersey fabrics and their Model MJ high speed plain jersey machine.
IN ATTENDANCE: Sam Mishcon, Lester Mishcon, Sidney Mishcon, Harry Agulnek, Irving M. Golden, Harry A. Strasburg, Bernard Narker, Al Maliuck, Clyde Dupuis, Joseph Teitelbaum, Jack Radin.

SYNTHANE CORP., OAKS, PA.—(372, 373)
EXHIBIT: Laminated plastic products such as sheets, rods, tubes and fabricated parts, with special emphasis on the uses of their material for the textile industry.
IN ATTENDANCE: E. E. Smith, Herbert Widdop, J. K. Johnson, C. B. Moss, J. M. Price.

SYNTHETIC YARNS, SYNFOAM YARNS, INC., LOWELL, MASS.—(327 to 329 incl.)
EXHIBIT: Thrown yarns of all synthetic fibers, put up on headless packages and on cones; also stretch Helanca type nylon and Dacron yarns put up on cones and headless packages.
IN ATTENDANCE: T. Leo Power, Louis Malina, Harold F. C. Wilcox, Fred H. Diamond, Fred Malina, Arthur Malina, Roy Westland, Earle Taber, E. K. Woods, Harry Calder, Nat Vaiman, Ben Appelle, S. H. Eisenberg, Jud Shapiro, Bob Meltzer.

STAROBA—Model MD-400 Circular Knitting Machine for seamless hosiery

TEXTILE MACHINE WORKS—The Reading CK-A Circular Knitting Machine

TALCOTT, INC., JAMES, NEW YORK, N. Y.—(23)
EXHIBIT: They will show in graphic form and actual case history how factoring can assist a company in its expansion program.
IN ATTENDANCE: Emanuel P. Lewis, Sigurd B. Salvesen, Matthew C. Spinner, Joseph A. Zeller.

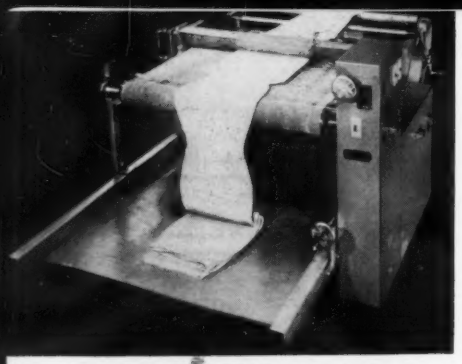
TANNENBAUM & CO., IRVING, EDDINGTON, PA.—(554)
EXHIBIT: All types of thrown yarns and all types of synthetic sewing threads for high speed machines.
IN ATTENDANCE: Martin Tannenbaum, Herman Teich, Andrew Brown, Andrew Walser, Irving A. Tannenbaum.

TELE-SONIC CORP., NEW YORK, N. Y.—(448)

TEXTILE AGE, COS COB, CONN.—(400)

TEXTILE INDUSTRIES, ATLANTA, GA.—(106)

TEXTILE MACHINE WORKS, READING, PA.—(517 to 526 incl., 510 to 513 incl.)
EXHIBIT: Three Reading CK-A circular knitting machines for men's fancy pattern hosiery will be shown for the first time; there will also be displays and information available on their Reading 100 full-fashioned knitting machine, their full-fashioned outerwear machine, tricot machine, spring beard and latch needles and other wire products.
IN ATTENDANCE: Richard C. Wetzel, Louis R. Thun, R. N. Apprich, ElRoy P. Master, Lewis C. Scheffey, Jr., Robert J. Ryan, Raymond W. Weaver, E. A. Shoemaker, Harry R. Wade, Charles R. Moyer, Paul Kroener, William Heckman, William A. Dufft, Homer Wendling, Erwin Rebmann, George Henning, Earl Paige, Hans G. Fiedler, Lester T. Yeager, Harold Haak Wilbur Haupt, Daniel Hehr, Douglas Heydt, Donald McDonnell, Raymond Rogers, Lewis C. Scheffey, Jr., N. J. Heaslip, B. F. Colle, Nathan Levin, J. E. Kline, L. P. Garrigan, Warren Dresher, Martin Coudeu, Jack Doorlay, Ernest Frank, Francis Hughes, William Marshall, Henry Printz, Darrell S. Rank.



TUBULAR TEXTILE—Tube-Tex Electronic Framer and Steamer

TEXTILE WORLD, NEW YORK, N. Y.—(291, 292)

TEXTILES INC., ABINGTON, PA.—(367, 368)

THREADS INC., CHICAGO, ILL.—(64, 65)

TOMPKINS BROTHERS CO., SYRACUSE, N. Y.—(450)

EXHIBIT: New Model S-1 Junior circular spring needle knitting machine in operation; pictures of other Tompkins machines; samples of finished cloth knitted on their machines.

IN ATTENDANCE: W. A. Ingalls, Harold A. Fairchild and Harold Hitchcock.

TORRINGTON CO., TORRINGTON, CONN.—(301, 302, 311, 312)

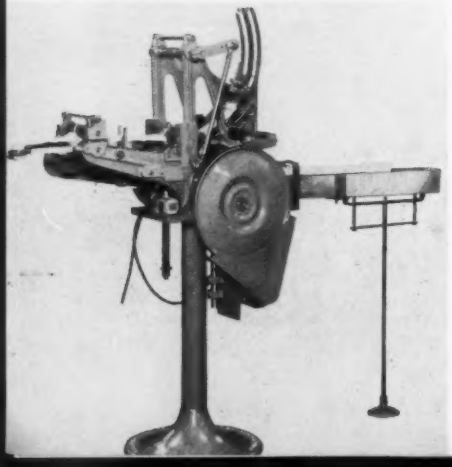
EXHIBIT: Display featuring the firm's manufacturing facilities and the types of needles they manufacture for knitting and sewing machines and other specialized uses; their newly developed packaging for latch needles.

IN ATTENDANCE: W. W. Blelock, W. R. Reid, Jr., C. H. Rowe, C. R. Johnson, L. W. Losee, E. W. Pearson, David J. Reid, Harold M. Deming, L. R. Whitcomb, A. V. Maurer, F. A. Howard, Jr., W. B. Meeter, D. A. Burghoff, H. D. Blake, H. S. Gordon, George T. Stanley, H. E. Gosling, C. T. Spalding, William Myers, R. L. Brace, J. J. McCaffrey, E. P. Schwarze, J. W. Beaber, P. S. Warner, W. A. Patz, H. E. Gosling, Jr., G. B. Walls.

TRICOMA, INC., NEW YORK, N. Y.—(178, 179, 180, 183, 184, 185)

EXHIBIT: They will show the following foreign machines: Three single lock flat power machines, a semi-automatic flat jacquard machine and a semi-automatic stitch increase machine, all of Hertel & Richter, Kiel, Western Germany; Model "Tricolor" double cylinder, three-feed jacquard machine of Officina Moncenisio, Condove, Italy; a linking machine for outerwear of Hilbert Co., Westheim, Germany; and a winding machine "Supercoiler" for winding from supply cone to knitting cones of Tessilmeccanica Lombarda, Milan, Italy.

IN ATTENDANCE: Walter W. Glocer, Carl E. Weinberg, Mrs. U. Glocer, Bruno Schulz, Franco Gariboldi, J. Nussbaum.



TUBULAR TEXTILE MACHINERY CORP., WOODSIDE, N. Y.—(166 to 169 incl.)

EXHIBIT: Full range of Tube-Tex finishing machinery for circular knit fabrics, including extractor pad, Reel-Jet dryer, tensionless calender, straightline calender, electronic framer and steamer, and matching machine.

IN ATTENDANCE: Eugene Cohn, Joseph Cohn, Don Foreman, John Sasson, Lee Rothenberg.

TURBO MACHINE CO., LANSDALE, PA.—(59, 60)

EXHIBIT: None. Space to serve as reception booth.

IN ATTENDANCE: E. J. Berger, Benjamin C. Hall, Francis Huguenin, Paul Wenhold, W. K. Wyatt, J. R. Brownell, Edward Hughes, M. M. Lihn, Grant Brewin.

TWITCHELL, INC., E. W., PHILADELPHIA, PA.—(144)

EXHIBIT: Complete line of packaging items.

IN ATTENDANCE: James B. Holland, Jonathan P. Wark, Robert H. Therrell, Barney Weingard, Fred B. Miller, Ben J. Vetrone, Neil Sullivan, John Junod.

UNION SPECIAL MACHINE CO., CHICAGO, ILL.—(458, 459, 460, 479, 480, 481)

EXHIBIT: Eleven different styles of sewing machines, including their hosiery seamers, Styles 41300 W and X; new overseamers, Styles 39500 A and F; three of their Fifty Thousand Series flat bed machines; and other machines of interest to the knitting trade.

IN ATTENDANCE: Travis S. Whitsel, Clarence L. Rosenquist, Larry M. Brown, Arthur J. Feigel, Merritt M. Ambrose, Ben W. Merz, John R. Haderly, William G. Booth, Elton S. Rockney, William E. Palm, Luther D. Cassell, Clarence D. Mairs, Ralph B. Foster, Richard L. Smith, Robert S. Vogt, David M. Bender, Edward M. Nusbickel, Harding T. Powell, Emory W. White, Marion F. Groover.

UNITED ELASTIC CORP., EASTHAMPTON, MASS.—(90 to 93 incl.)

EXHIBIT: Elastic webbing and braid for underwear and hosiery and all other purposes.

IN ATTENDANCE: Raymond A. Waite, Walter E. Dalby, Ernest R. Boehm, George B. Weidhaas, Duncan B. Cameron, Frank L. Dorr, Ernest E. Cadwell.

UNITED SHOE MACHINERY CORP., BOSTON, MASS.—(438)

EXHIBIT: Latest model carton forming machine in operation.

IN ATTENDANCE: Robert McA.Lloyd, Richard K. Sprague, Donald C. Smith.

U. S. BLIND STITCH MACHINE CO., NEW YORK, N. Y.—(564)

EXHIBIT: Blind stitch machines for mock fashioning operation and for all hemming operations.

IN ATTENDANCE: Julius Bruno, George Motzel, B. Zeldis.

U. S. HOFFMAN MACHINERY CORP., NEW YORK, N. Y.—(441, 442)

EXHIBIT: Their ES-10 steam vacuum finishing board and their NFF-7 hot head, designed for pressing knitted work.

IN ATTENDANCE: Louis Lichtman, Harold Rosenblatt, John G. Weingarten.

U. S. HOSIERY CORP., NEW YORK, N. Y.—(482, 483)

EXHIBIT: A 474-needle Booton twin feed ladies seamless machine; flatseam and overlock Mauser special industrial sewing machines; and a "Rotex" universal band cutting machine.

IN ATTENDANCE: J. N. Bogoff, Herman Booton, John Mac Eachern.

UTICA NOVELTY—Double Cuff Cutting and Turning Machine

U. S. RUBBER CO., LASTEX YARN & RUBBER THREAD DIV., NEW YORK, N. Y.—(315, 316, 321, 322)

EXHIBIT: Lastex and Laton elastic yarn; Lactron extruded rubber thread; and Revere cut rubber thread and tape.

IN ATTENDANCE: M. E. Bliss, H. B. Cobb, W. J. Connelly, A. R. Engel, W. F. Giddings, P. J. Regan, Howard Young.

U. S. RUBBER CO., TEXTILE DIVISION, NEW YORK, N. Y.—(280, 281)

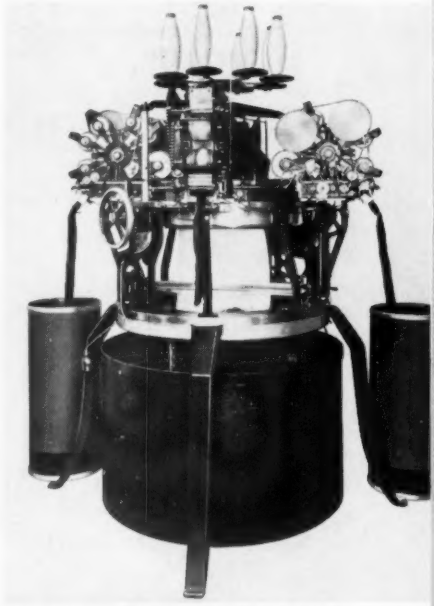
EXHIBIT: Knitting yarns, both cotton and synthetic; also sweaters, jersey fabrics, blouses, knit dresses.

IN ATTENDANCE: W. E. Clark, W. D. Johnson, V. C. McQuiddy, Jr., J. B. Jackson, B. W. Wiesen, R. S. Gibson, H. E. Anderson, W. J. McCarty, R. P. Clark, S. K. George, R. R. Hampton, R. W. Jennette, W. H. Bric, J. W. Reid, J. H. Shaw, Julius Blum, J. M. Pope.

U. S. TESTING CO., INC., HOBOKEN, N. J.—(462, 477)

EXHIBIT: Pilling tester, singles twist tester, knit shrinkage gauge, textile testing instruments, and certified fugitive tints.

IN ATTENDANCE: F. P. Brennan, C. M. Michie, Jr., E. G. Railo.



WILDMAN JACQUARD—Model FBW-6 Pile Fabric Machine

U. S. TEXTILE MACHINE CO., SCRANTON, PA.—(181-182)

EXHIBIT: No display. Reception booth only.

IN ATTENDANCE: A. W. Thomas, Jr., P. J. Thomas, Fred C. Nave.

UNIVERSAL WINDING CO., PROVIDENCE, R. I.—(219 to 224 incl.)

EXHIBIT: Stretch and bulk yarns produced on their Superloft and Fluflon stretch yarn machines; also fabrics made from such yarns.

IN ATTENDANCE: Robert Leeson, R. S. Pennock, J. W. Stribling, J. R. Breen, F. P. Barrie, J. A. Freed, E. Stowell, K. H. Gibson, C. Dudzik, T. L. Cotter, Paul P. Johnson, W. V. Goodhue, J. V. Keith, J. B. Howarth, A. D. Weston, J. A. Nasmith, H. H. Richardson.

UTICA NOVELTY & MILL SPECIALTY CO., UTICA, N. Y.—(160 to 162 incl.)

EXHIBIT: They will show the following ma-

chines of their manufacture; extractor loader and unloader; electric automatic lay up machine; combination cutting & winding machine; and new automatic double cuff cutting and turning machine.
IN ATTENDANCE: J. A. Firsching, Jr., J. A. Firsching, III, Donald Firsching.

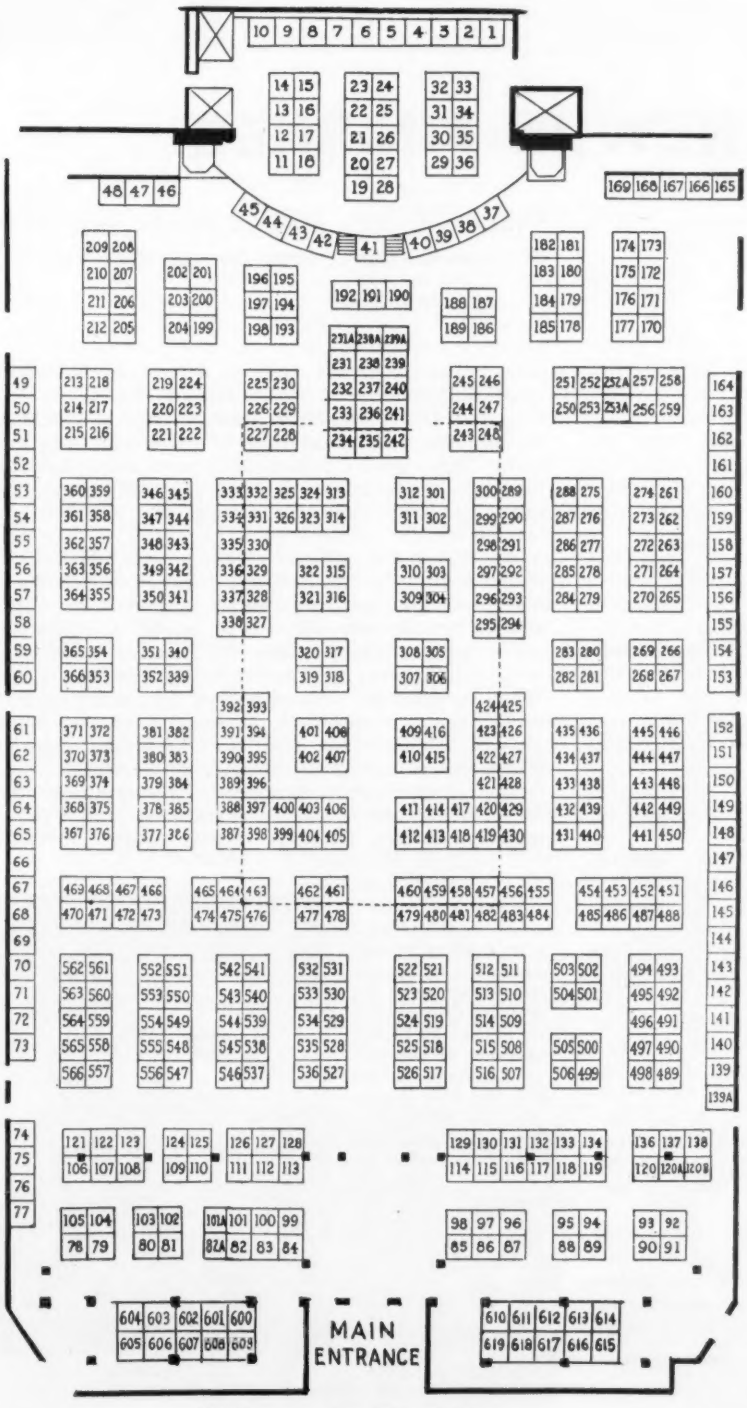
VALDESE MANUFACTURING CO., INC., VALDESE, N. C.—(545, 546)

VEEDER-ROOT, INC., HARTFORD, CONN.—(537)

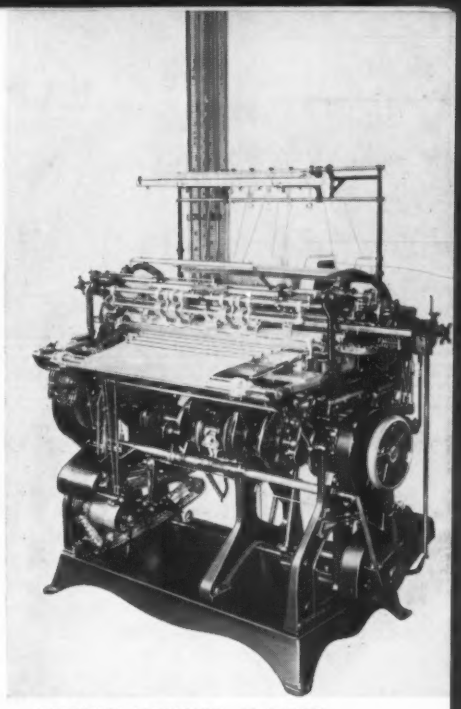
EXHIBIT: Production recording and production control counters for all types of knitting, hosiery and other machinery; also various other types of counters.
IN ATTENDANCE: A. E. Kallinich, G. L. Logan, T. Nelson, F. J. Swords, R. E. Walker, R. G. Perfect.

VICTOR RING TRAVELER CO., PROVIDENCE, R. I.—(42, 43)

EXHIBIT: No display. Space to serve as reception booth.
IN ATTENDANCE: Harold E. Robbins, Arthur F. Howard, Byron H. Waterman, Elmer L. Connor, Ernest Cranshaw.



Where to find them



WILDMAN JACQUARD—Model TFS
Full Fashioned Sweater Machine

WALTON LABORATORIES, INC., IRVINGTON, N. J.—(446, 447)

EXHIBIT: Humidifiers and dehumidifiers in operation; also humidity controls and a new humidity indicator.
IN ATTENDANCE: Jack Felderman, Bob Lewis, George Lyons.

WESTERN PRINTING CO., NEW YORK, N. Y.—(386)

WESTINGHOUSE ELECTRIC CORP., PITTSBURGH, PA.—(76, 77)

EXHIBIT: Various types of motors; a control device for braking AC motors; a full-fashion knitting machine drive.
IN ATTENDANCE: W. J. Plantes, F. T. Benner, P. F. Holstein.

WHITIN MACHINE WORKS, WHITINSVILLE, MASS.—(425, 426)

EXHIBIT: No product display. Reception booth only.
IN ATTENDANCE: J. Hugh Bolton, Harry Moss, Robert F. Waters, George F. McRoberts, Charles May.

WILDMAN JACQUARD CO., NORRISTOWN, PA. HEMPHILL CO., PAWTUCKET, R. I.—(250-253, 256-259)

EXHIBIT: Both companies will display a diversified line of outerwear, underwear and hosiery machines, as follows: Models AI, TJI-12, TAI-24 Jacquard machines; Style Nos. FBW-6, TFS, TFSS, and PB-2 Wildman machines; and Models VIP, ARA-F2, SCOP-CC, SCOP-KE Hemphill machines.
IN ATTENDANCE: From Wildman Jacquard—C. F. Miller, R. C. Dott, Joseph Tittl, Joseph Olachea, Frank Beeton, John Brennan, Frank Wildman, Jr.; From Hemphill—Benjamin R. Ebersman, Richard M. Sachar, Eugene St. Pierre, Theodore Charles Brown, Miss Ethel Brown.

WILLCOX & GIBBS SEWING MACHINE CO., NEW YORK, N. Y.—(353, 354, 365, 366)

WOVENCRAFT FOR WOVEN LABELS, NEW YORK, N. Y.—(164B)

EXHIBIT: Woven labels.
IN ATTENDANCE: Robert Baum.

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PAPERS OF THE
AMERICAN ASSOCIATION FOR
TEXTILE TECHNOLOGY INC.®

A A T T

SOMETHING NEW IN FINISHES

Cyanamid's new product checks formation of human body odor on apparel fabrics

By Jason M. Salsbury

A PURIFYING finish is different from any other textile finish. The familiar finishes, such as the wrinkle resistant and water repellent ones, act only by modifying the chemical and physical properties of fabric. A purifying finish modifies the biological properties of fabric. Putting it another way, a purifying finish reduces the number of microorganisms growing on a material.

Why is this property important? Contrary to popular belief perspiration is odorless until bacteria attack it, forming the characteristic body odor. By reducing the number of growing microorganisms or bacteria, Cyana Purifying Agent, a trademarked product of American Cyanamid Corp. offers durable protection against body odor formation on fabric. Garments without body odor will increase the wearer's social acceptability and will increase the time the garment can be worn before requiring washing. This will lessen the wash load for housewives. Since washing degrades fabric, a purifying finish increases the useful life of garments.

Bacteria are all about us and difficult to remove completely. If we were to scrub our hands for 15 minutes using a surgeon's pre-operative procedure, we would greatly reduce the number of bacteria on our hands, but our hands would not be sterile. Enough bacteria would remain on our skin to produce millions more in a few hours.

The development of a purifying finish for fabric has been appropriate for Cyanamid because we have in our company experts who are familiar with both the textile and pharmaceutical fields. We were able to use the extensive information obtained by our Research and Lederle Divisions dealing with the effect of chemicals on humans and bacteria. Even with the aid of this knowledge it took years to develop our finish.

While purifying finishes are not new, commercial application of them to textiles has developed slowly because no really durable ones were available. Interest in an antiseptic finish for textiles is reported as far back as the 1930's when cloth coming into contact with the skin was shown to be sufficiently contaminated with bacteria to cause infection. During the last war, the Army and Navy treated hospital blankets by spraying with an emulsion of a nondurable germicide. These blankets were used, particularly in field hospitals, where adequate laundry facilities were not available. They definitely reduced the incidence of reinfection.

Bacteria are very small plants—about 400 million would occupy the volume of a grain of sugar. They are classified by three major systems—by their shapes, by their requirements for air and by their reaction to a certain dye. The last system divides bacteria into Gram-positive and Gram-negative types. When bacteria are stained with a dye called crystal violet, then treated with iodine and washed with alcohol, the Gram-positive bacteria remain colored while the Gram-negative bacteria are decolorized.

The Gram-positive bacteria are responsible for many of our common diseases, such as scarlet fever and sore throat. They are usually easily controlled

Jason M. Salsbury

Dr. Salsbury is manager of the textile resin research section of the American Cyanamid Co. He received his B.S. degree from the University of Richmond and his M.S. and Ph.D. degrees from the University of Virginia. He has been associated with the American Cyanamid since 1946. In 1954, he was transferred to the Bound Brook Laboratories in the position he now holds.

Presented at the March 6, 1957 Meeting of the American Association for Textile Technology, Inc.

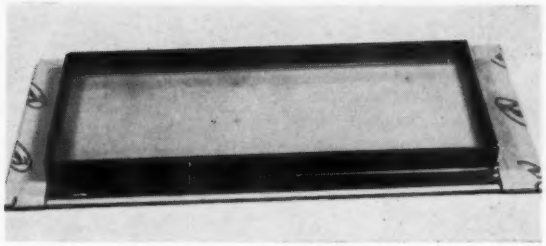


Fig. 1—Inoculated Agar

by drugs. The Gram-negative bacteria, which cause typhoid and many of the intestinal upsets are more difficult to kill. Some experts claim that only Gram-positive bacteria are responsible for the formation of body odor. We have found that Gram-negative bacteria will also cause body odor by their action on perspiration. For good protection against formation of body odor, a purifying finish must be effective against both Gram-positive and Gram-negative bacteria.

To understand how a purifying finish can control body odor, a knowledge of the mechanism of body odor formation is desirable. None of the skin's secretions or products have a natural odor. Odor is generated by bacteria growing on the skin's surface. Bacteria grow in great abundance everywhere on the skin owing to the presence of proteins, fats and carbohydrates which are the products of the skin's own growth. These bacteria are normally harmless and do not cause disease. Their presence is objectionable only because they produce odor.

Socially unacceptable odor is dependent upon the presence of perspiration. There are two types of sweat glands and they influence odor in two different ways. Eccrine sweat glands are the ones which start to secrete when a person gets hot or is emotionally aroused. They are widely distributed over the body and their main function is cooling. This type perspiration only indirectly promotes odor since it itself is not a good medium for bacterial growth.

However, by making the surface wet, it provides the moisture which bacteria need to break down the substances normally present on the surface. The wetter the surface, the more numerous the normal bacteria; however, the surface constituents acted upon by these bacteria are not potent sources of odor. Surface odor becomes objectionable only when the clothing is infrequently changed or washed, particularly if the garments are periodically made wet by perspiring.

Apocrine sweat glands are concentrated in certain areas of the body, mainly underneath the arms, and in the groins. They produce occasional odorless droplets which are not sufficient to cause wetness but very strong and disagreeable odors are generated when

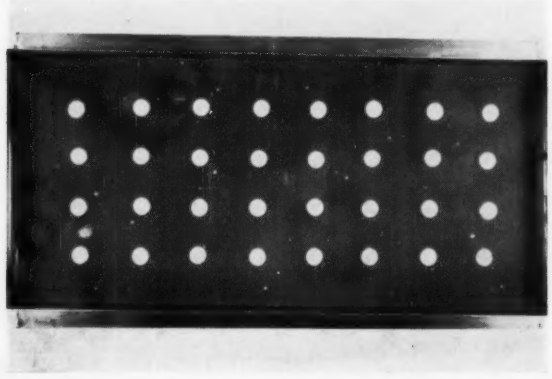


Fig. 2—Fabric Samples in Inoculated Agar. (Note: Spots are due to stray bacteria which grew when plate was photographed.)

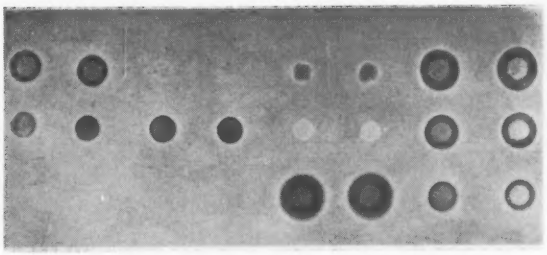


Fig. 3—Agar Plate Test Results—After Incubation in Oven

the normal skin bacteria begin to attack this secretion. Although the amount of apocrine secretion is very small, a very pungent and pervasive odor is liberated even from a single droplet.

The intensity of underarm odor is almost entirely due to decomposed apocrine perspiration. Eccrine sweat glands also occur in the armpits and are responsible for moisture. If there is much eccrine perspiration, underarm odor is increased since there will be more bacteria to attack the apocrine perspiration. The eccrine perspiration can also transfer odor already formed from the body to garments or from an inner garment to an outer garment.

Without bacterial decomposition there is no odor in perspiration. Thus there are two ways of preventing body odor. We can attempt to stop perspiration, a practice which medical men tell us is undesirable and impractical, or we can control its decomposition by bacteria. Our purifying finish is designed to do the latter. By greatly reducing bacterial growth, bacterial decomposition of perspiration is prevented, thus preventing body odor. Purifying agents are not deodorants. They protect against body odor formation, but do not remove odor already formed.

When we started developing a purifying finish there was no standard method or generally accepted procedure for testing the effectiveness of chemicals for preventing bacterial growth on fabrics. We called in our experts who had been testing chemicals for biological activity for many years. With their help the available literature was critically evaluated and a screening test was devised which has served as a basis for all our testing. This test is a modification of the method used in screening potentially active drugs. Since the test is so different from those generally used in testing other properties of fabrics, I will describe it briefly.

A tray of inoculated agar, a brownish substance which looks and acts like stiff gelatin, is prepared as shown in Figure 1. This nutrient agar has been seeded with a Gram-positive or Gram-negative bacteria. Small disks, about 11.5 mm. in diameter, are punched out of the fabric to be tested. These disks along with disks of control fabric are placed on the agar surface as shown in Figure 2. After 2 hours, the fabric samples are carefully removed from the inoculated agar. The test plate is put in an oven and held overnight at body temperature, 98.6°F. This is the temperature most favorable to growth of many bacteria.

When the plate is removed from the oven, the agar is opaque because of the millions upon millions of bacteria that have grown. The agar is clear under the fabric which contained an effective purifying agent. Not only is this area clear, but there is usually a clear zone of inhibition around this area as is shown in Figure 3. Under the untreated fabric there is no inhibition.

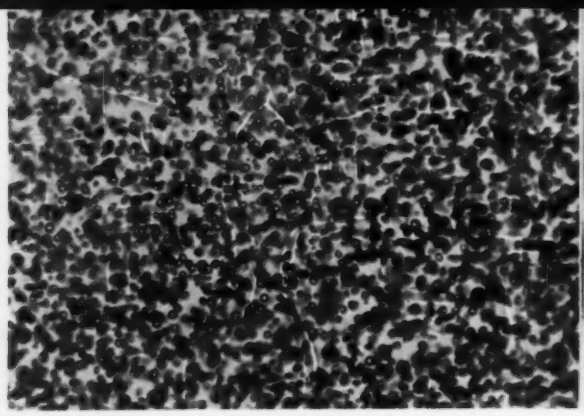


Fig. 4—Photomicrograph of Agar. Fabric does not inhibit bacterial growth

Fig. 5—Photomicrograph of Agar. Fabric inhibits bacterial growth

To show more clearly how the incubated agar looks enlarged photographs are shown in the next figures. A photograph of the agar under an untreated sample is shown in Figure 4. This is proof that bacteria grow and multiply under the test conditions. A photograph of the agar under a sample treated with Cyana Purifying Agent is shown in Figure 5. You can see the impression of fabric but notice the absence of bacteria growing on the agar. In Figure 6 a few colonies of bacteria are seen on the agar. This result is called a partial inhibition. To protect against body odor formation, at least a partial zone of inhibition is required. Here is laboratory proof that fabric treated with our purifying finish not only has the power of preventing bacterial growth even under conditions most favorable to growth, but also has the ability to transfer this power to other materials with which it comes into contact.

Just as there was no standard laboratory test, there was even less written about how to measure and record body odor. We could find no directions for making people develop odor under controlled conditions. We realized the necessity of developing an end use test and of correlating it with our laboratory method to determine the value of a purifying finish for controlling body odor in fabric.

A panel of people whose body odor level was known was required. We soon found that body odor varies greatly among people. There are some who have practically no body odor under most circumstances, and at the other extreme there are some real stinkers, whose body odor is very intense. In addition to a panel of real stinkers, it is also necessary to have a panel of smellers. The body odor formed in humans must, of course, be judged and must be judged in a standard way. Since most body odor occurs in the perspiration in the axilla or armpits, we call our panel of judges professional armpit smellers.

The system we devised is based on odor level. If a person would be socially acceptable we would rate his odor level as zero. Less odor is rated -1 and a rating of -2 is given if our judges could not detect any odor. When a person's odor level is greater than socially acceptable a $+1$ rating is used. When the judge comes to a real stinker, he yells $+2$ and leaves in a hurry. These tests are subjective, but the human nose must remain the final criterion of body odor.

An experiment was statistically designed to determine the correlation between the agar plate test and actual control of body odor formation. The effectiveness against both Gram-positive and Gram-negative bacteria was determined by the usual agar plate test for samples of fabric treated with five different concentrations of our purifying agent. These samples were then tested for control of body odor formation through the Department of Dermatology of a leading Eastern medical college. We asked that the severest possible test be designed to measure the effectiveness of our purifying agent in controlling body odor in fabric.

Over 250 active men were screened to pick eight men who were real $+2$ stinkers. The armpits of these men were washed three or four times with soap and water until all traces of odor disappeared . The fabrics were taped in the armpits of these men for 48 hours. At the end of this time, the odor level was determined by the nose test.

Excellent correlation between odor level and diameter of inhibition was obtained as is shown in Figure 7. Another important observation is that effective odor control, that is, control of odor level to the point of social acceptability, was obtained only when the activity against both bacteria was at least a partial zone of inhibition. I must emphasize that this data was obtained with Cyana® Purifying Agent and different results may be obtained with other compounds. This is one of the bases of our statement that activity against both types of bacteria is required for effective odor control.

With this general background, let us now consider Cyanamid's new purifying finish. Cyana Purifying Agent is an aqueous solution. It is unaffected by freezing or storage at 120°F. It is readily dilutable with water and is compatible with cationic and nonionic products. It is nonirritating and nontoxic to the human skin.

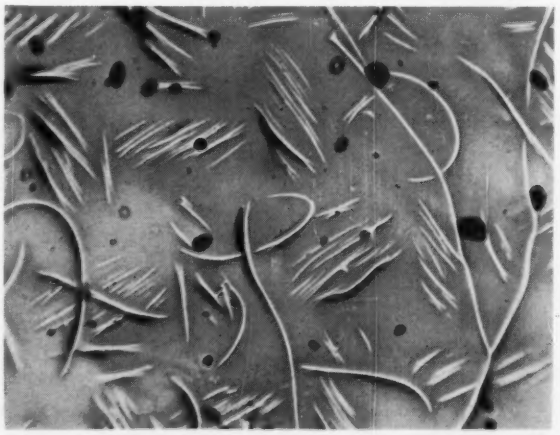


Fig. 6—Photomicrograph of Agar. Fabric inhibits most bacterial growth

Cyana Purifying Agent is easily applied to fabric with modern textile finishing equipment. No special equipment is required. Now what will this new finish do on fabric? The following data were obtained on fabric treated with 10% Cyana Purifying Agent.

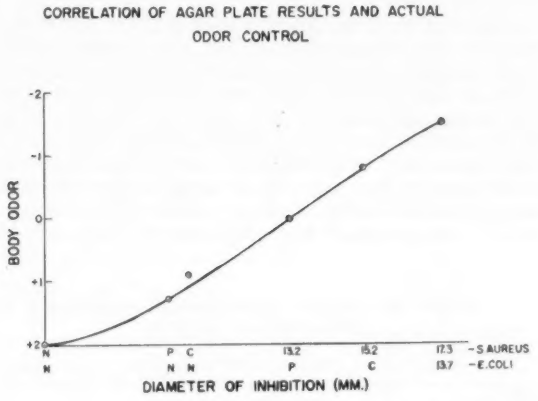


Fig. 7

Excellent inhibition of growth of both Gram-positive bacteria, such as S. aureus, and Gram-negative bacteria, as E. coli, was obtained with all fabrics tested, hydrophilic, hydrophobic and blends of both. This is shown in Fig. 8. The diameter of the test disk of fabric was 11.5 mm.; therefore, large zones of inhibition are indicated by the large diameters of inhibition shown in Fig. 8. We feel that activity against both types of bacteria are important because either type can cause body odor by attacking apocrine perspiration.

Unlike other purifying finishes which contain binders, Cyana does not change the hand of treated fabrics. Heat, light and abrasive action do not destroy the activity of fabric treated with our purifying agent. We subjected treated cotton to dry heat, such as 20 minutes in an oven at 300°F., or scorching for 5

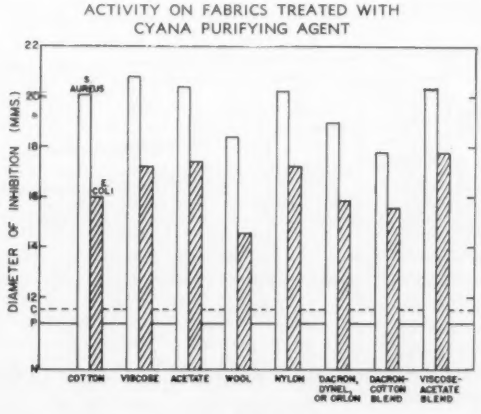


Fig. 8

minutes at 365°F. and to wet heat, such as sterilizing in an autoclave at 250°F. for 15 minutes or steaming 5 minutes in a Hoffman flat bed press. The same fabric was exposed 80 hours in a fade-ometer. Its activity against both types of bacteria was retained through these treatments. This fabric was also abraded mechanically to remove 50% of its weight. This simulates what might happen upon severe wear. It was still active against both Gram-positive and Gram-negative bacteria.

Fabric treated with our purifying finish will not require a bleach when washed with modern detergents. The brighteners in the detergents will ensure a white fabric and the purifying finish will act as an antibacterial agent. If a bleach is necessary, hydrogen peroxide or sodium perborate can be used without affecting Cyana Purifying Agent. Sodium hypochlorite cannot be used.

We emphasized at the beginning of this paper that the antibacterial activity of fabric treated with Cyana Purifying Agent is durable. What do we mean by durable? We have used several criteria of durability. First, we have washed treated fabric in an automatic, home washing machine with either soap or detergents, such as Tide. As shown in Figures 9 and 10

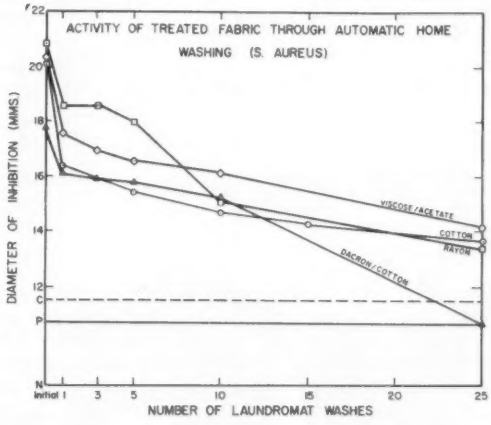


Fig. 9

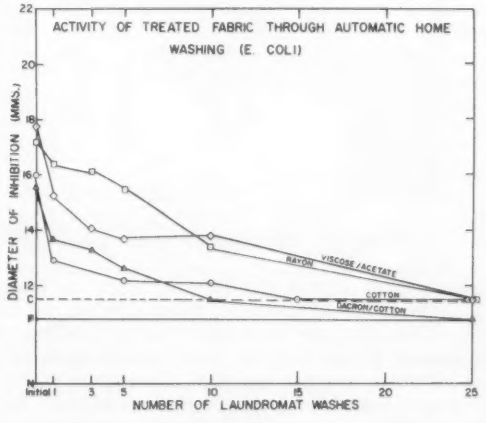


Fig. 10

we have excellent durability on cellulosic fabrics and blends of cellulosic and hydrophobic fibers. Cotton, viscose, and viscose acetate blends retain their activity against both Gram-positive and Gram-negative bacteria through 25 washes. The Dacron polyester fiber and cotton blend was active through 25 washes against both types of bacteria. We have recently carried the treated cotton fabric through 50 washes and it is still active against both types of bacteria.

The durability of our finish to washing is less on wool and the hydrophobic fibers than on the cellulosic fabrics or their blends. Although activity against both Gram-Positive and Gram-negative bacteria on these

fibers is durable to a few automatic home laundry washes, the incorporation of a binder such as Aerotex Water Repellent S is required to get excellent durability. Figure 11 shows that acetate, Dynel, Dacron Polyester fiber, Orlon acrylic fiber and wool treated in this manner retains their activity against S. aureus through twenty-five washes. Treated nylon is active through fifteen washes.

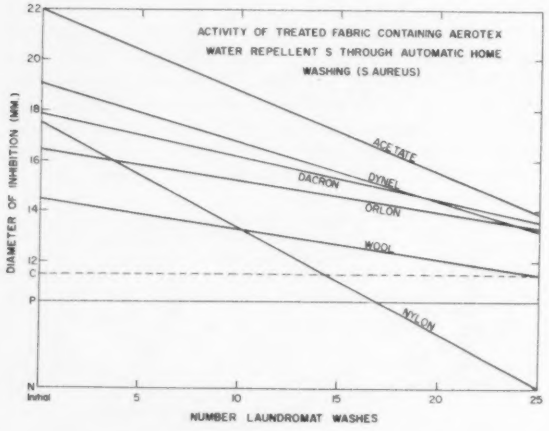


Fig. 11

The durability of the finish on nylon can be increased to twenty-five washes by increasing the concentration of the Cyana Purifying Agent or by using Aerotex Resin 134 as binder. Durable activity is obtained against the Gram-negative bacteria, E. coli, as shown in Figure 12. Treated acetate, Dacron,

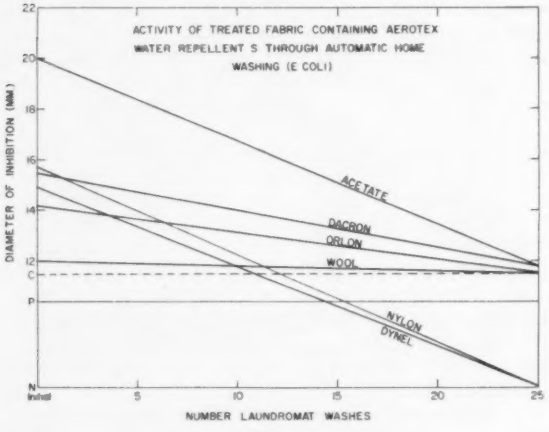


Fig. 12

Orlon, and wool maintain their activity through twenty-five washes, while treated nylon and Dynel were active through fifteen washes. Again, by using Aerotex Resin 134 as a binder durable activity to twenty-five washes is obtained.

Another measure of durability is resistance to commercial dry cleaning. As you know there are two kinds of dry cleaning procedures used today. The solvent procedure is less severe than the wet, dry cleaning process which uses both solvent and soap or detergent with a small amount of water. Our purifying finish is extremely durable to both procedures. Data in Figures 13 and 14 show excellent durability on wool, cotton, acetate and viscose—through 25 wet dry cleanings—against both types of bacteria. Treated nylon requires Aerotex Resin 134 to get similar durability.

From the foregoing, it is apparent that we define a durable finish as one which will withstand repeated launderings or dry cleanings and still retain its antibacterial activity.

Now that we have demonstrated activity and durability by the agar plate test, you are probably interested in proof that Cyana Purifying Agent actually controls body odor after washing. We can demonstrate this important property in a number of ways. First by a carefully controlled experiment performed by our consulting dermatologist. Eight real stinkers were used in this test. Their armpits were washed with soap and water until all traces of odor disappeared. Then treated fabric was taped in one armpit

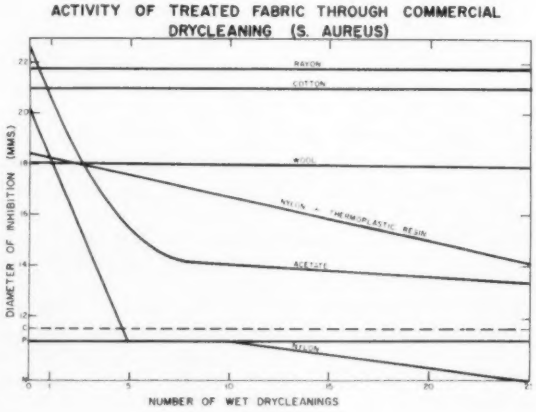


Fig. 13

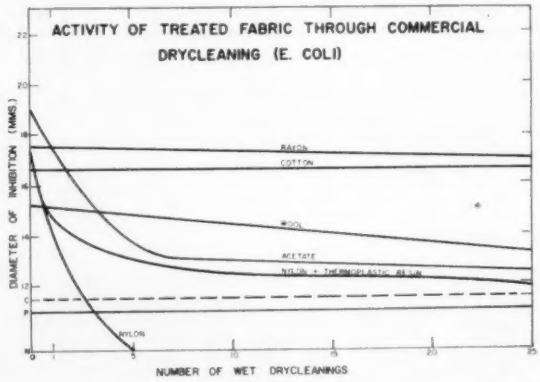


Fig. 14

and an untreated fabric was taped in the other armpit as a control.

The men wore these fabrics for 48 hours. At the end of this time each armpit was given the nose test and rated as shown in Figure 15. In this figure is shown the actual data, not averages. These men were really +2 stinkers as is shown by the odor in the untreated fabric. No body odor was found in the armpit containing the treated fabric before washing, in 6 out of 8 men and others were socially acceptable. Excellent control of body odor was retained through 10 and 25

(Continued on Page 103)

Nylon Rope

(Continued from Page 48)

adverse experiences were required to establish rayon as a fiber in its own right, rather than as an artificial silk.

Nylon and other man-made fibers of high strength and elongation, are inherently different from natural cordage fibers in properties other than strength. Adverse performance experiences when nylon or other man-made fibers were first twisted into rope are attributable to the failure to recognize that these fibers required a technology different from the established processing method for natural fiber rope. Some fibers like nylon impart a surface frictional effect which would prevent full rope strength attainment. Others like Orlon acrylic fiber, because of cross-sectional shape, must reflect a different technology in order to avoid poor strength translation as the fibers are twisted progressively into final rope form.

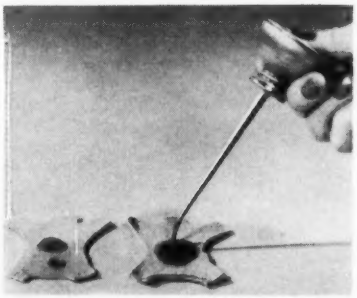
Based upon a technology developed from systematic correlation of fiber properties with the end-use requirements, this newly-developed nylon rope structure will serve to present the best properties of nylon as a rope material. The progressive ropemaker, aware of the dynamic technologies required to insure customer satisfaction, faces a bright future with nylon and other man-made fiber ropes.

Further details regarding the ropemaking development described above may be obtained from Boston Cordage Associates, 26 Fairbrook Road, Framingham, Mass. This firm are consultant technologists for cordage and related products processors.

Dyeing Notes

(Continued from Page 53)

Oil-Resistant Suede



Minnesota Mining and Manufacturing Co. has announced a treatment for suede leather that will eliminate suede's natural "oil hunger" and make it water-repellent and oil-resistant both before and after dry cleaning. The new treatment, "Scotchgard" brand stain-repeller for leather, will be initially offered to leather manufacturers through the tanners John Flyn & Sons, Inc., Salem, Mass., and A. C. Lawrence Leather Co., Peabody, Mass. The new treatment has a fluoro-chemical base as does the company's similar process for making textiles stain-repellent.

Naphthol Acrilan Dyeing

Three new developments in Acrilan dyeing have been announced by Walter Hindle, associate director in charge of textile research for Chemstrand Corp. He reported Chemstrand had successfully used naphthol and sulphur dyestuffs in addition to the nine other dyestuff classifications usable on Acrilan. He also told the Southeastern Section of the American Association of Textile Chemists and Colorists at a meeting in Opelika, Ala., that his firm had worked out a new technique for screen printing of Acrilan without resorting to pressure agers. He said use of naphthol dyestuffs offered many heavy shades in very short dyeing times.

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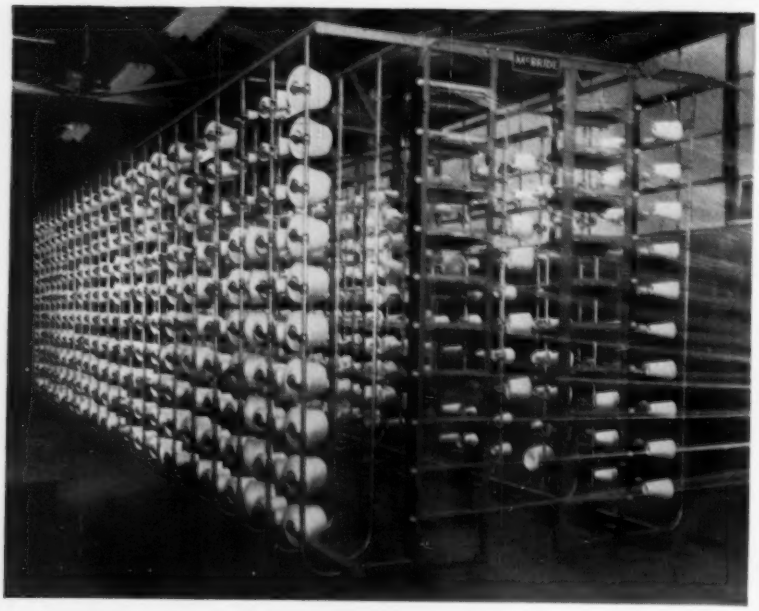

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Nonionic Surface Agents

Industrial Chemicals Division of Olin Mathieson Chemical Corp. is readying a line of nonionic surface active agents for general industrial use which it will market as Poly-Tergent. Four members of the line being initially offered are expected to have a wide range of applications in the textile field.

Poly-Tergent B-200 is dispersible in water and is an effective wetting agent for cotton. The B-300 possess outstanding properties as a wetting agent, detergent, emulsifier and dispersant, according to the division. B-300 is said to be particularly suited for raw wool scouring, desizing, dyeing and printing. The G-200 is miscible with most organic solvents and is only slightly soluble in water. The G-300 is completely soluble in water and a number of organics.

New Textile Softener

Arnold, Hoffman & Co., Inc., Providence, R. I., has introduced what it describes as a "universal" textile softener, Ahcovel X57, which performs effectively on cotton, viscose and acetate rayons, nylon, Orlon, Dacron and Darlan. It is claimed to be easily soluble in warm water, with a high degree of substantivity, low foaming properties, compatibility with most resin catalysts, and excellent softening for all synthetic and natural fibers. It is available in two forms, a fluid paste and a soft wax concentrate.

Arnold, Hoffman has available for distribution its latest technical bulletin, No. 132, which describes Synthrapol PWS, a nonionic surface active agent.

New Textile Chemcials

Development of two new textile chemicals—Sonofin C, a softener, and Sonolene L, a detergent, has been announced by The Textile Chemicals Division of L. Sonneborn Sons, Inc., New York City. Sonofin, described as a nonionic softener, 100 per cent active, is recommended for use with resin and starch finishes on cottons, rayons and synthetics. Superior detergency without the use of salts or alkaline builders is claimed for Sonolene L, for use on cottons, acetates and acrylics, with excellent white retention.

Dexter Chemical Expands

Completion of its new office building adjacent to its present manufacturing facilities in the Bronx, N. Y., has been announced by Dexter Chemical Corp. This is the first step of an expansion program to be completed by September 1. Plans call for a new plant for manufacture of resins and recently-developed synthetic organic chemicals, and a new research and development laboratory.

Textile News Briefs

Gordon Conference Dates

The Gordon Research Conferences this year will be held from June 10 to August 30 at Colby Junior College, New London; New Hampton School, New Hampton, and Kimball Union Academy, Meriden, all in New Hampshire. Purpose of the conferences is primarily to bring experts up-to-date on the latest developments. Meetings of particular interest to the textile industry will be held from July 8-12 at Colby Junior College.

Carter Enlarges Plant

The William Carter Co., manufacturer of knitwear, has begun construction expanding its Barnesville, Ga., plant. Additions to be completed by May 15 will increase the knitting room working area by 12,000 square feet and the bleach house by 23,000 square feet, with a new 16,000 square foot building devoted to fabric printing.

Trade Group Directory

The Marketing Research Department of Werner Textile Consultants, 60 E. 42nd St., New York, has available limited supplies of its Directory of Textile and Apparel Trade Associations, at $1.00 per copy. The directory lists 275 textile and apparel trade groups in the U.S.A. and their respective administrators.

Draper Buys Hemphill

Draper Corp., Hopedale, Mass., has announced its acquisition of the Hemphill Co., Pawtucket, R. I. Hemphill manufactures various types of knitting machinery for men's and women's hosiery.

Textile Man Writes Book

The latest collection of original aphorisms, proverbs and reflections of Karl T. Marx, of Robert Reiner, Inc., have been published in booklet form under the title of "Random Thoughts." The book retails at $1.00 per copy, and at 60 cents per copy in lots of 500. It has been published by Drechsel Printing Co., Inc. 56 E. 11th St., New York 3, N. Y.

Hunter Machine Expands

James Hunter Machine Co., North Adams, Mass., has established its recently-acquired southern division, W. D. Dodenhoff Co., Inc., Greenville, S. C., as southern sales and service headquarters for two other Hunter divisions, Thomas Leyland Machinery Co. and Hunter Controls, Inc. Ernest Cannity, senior sales engineer of the company, is being transferred from North Adams to the Greenville headquarters.

Harris Research Sold

The Gillette Co. has announced acquisition of Harris Research Laboratories, Inc., an independent Washington, D. C., research firm. In addition to performing research for Gillette, Harris will continue to serve other industrial clients under the same corporate name.

Wins Celanese Fellowship

Fred M. Rawicz, Rego Park, L. I., N. Y., has won the 1957-58 Celanese Corp. of America fellowship in the School of Textiles at North Carolina State College. Selection of Rawicz to receive the $1,800 award covering one year of graduate study at the college was made by G. H. Dunlap, chairman of the Scholarship Committee and director of the Placement Bureau in the college's School of Textiles.

Bertner Expands Office

Sidney Bertner Co., yarn merchants and exporters are doubling their present office space. They will continue to be located in Suite 704, Empire State Bldg., New York City.

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What Do the Great Pyramids Have to Do With TEXTILE HARD CHROMIUM PLATING?

In ancient Egypt, the religious belief that the body must be preserved intact after death to achieve eternal bliss led to the construction of massive tombs durable enough to protect the dead against evil spirits or marauders through ages of oblivion. The most famous of these, the three Great Pyramids of Gizeh, each covering approximately 13 acres and towering nearly 480 feet, remain today as indestructible symbols of the marvelous engineering skill and sheer perseverance of the Egyptians who built them forty centuries ago.

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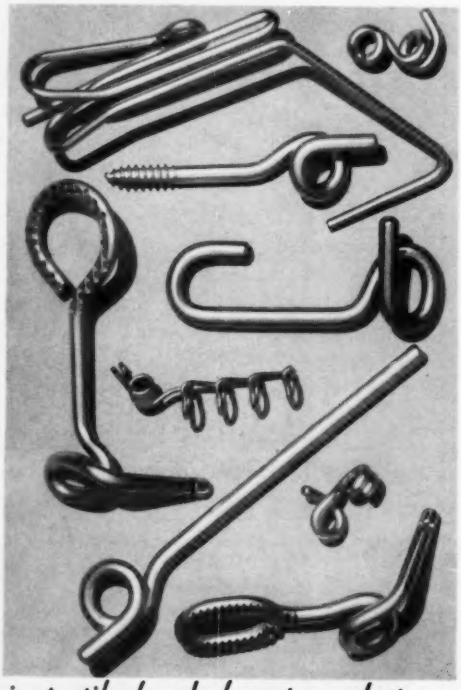

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77 NORTH AVENUE — ATTLEBORO, MASSACHUSETTS

Robert Leeson (left), president of Universal Winding, receives 25 year service award from his brother A. Dix Leeson, a company director.

Universal Winding Awards

Fifteen employes of the Universal Winding Co. received awards for long and faithful service at the firm's annual 25-Year Award Dinner in Providence recently. Nine employes received wrist watches in recognition of 35 years' services and six employes, including Robert Leeson, company president, were presented awards for 25 years' service.

Whitin Enters Electronics

The Whitin Machine Works, textile machinery company at Whitinsville, Mass., plans to acquire all of the outstanding capital stock of Harvey-Wells Electronics, Inc., and operate the electronic firm as a wholly-owned subsidiary. The acquisition of Harvey-Wells is another step in Whitin's diversification program.

Wallerstein, Baxter Merge

Merging of the Wallerstein Co., Inc., New York City, with Baxter Laboratories, Inc., Morton Grove, Ill., was jointly announced by William B. Graham and Harold E. Smith, respective presidents of the Baxter and Wallerstein firms. Baxter is a pharmaceutical house and Wallerstein specializes in use of enzymes in industry, including textiles. Wallerstein research has developed desizing agents for the textile industry and digestive spot removers for the dry cleaning industry.

New Chemstrand Offices

Chemstrand Corp. has moved its sales division in the Empire State Building, New York City, from various quarters on the 7th, 8th and 63rd floors to the entire 17th floor, which it has leased. The additional space not occupied by the sales division will be prepared for occupancy by the senior executives of the company when in New York and to house certain departments of the company.

Zefran Plant Under Way

Construction contracts for four buildings at The Dow Chemical Company's Lee Hall, Va., textile fiber plant have been awarded. All of the work is being supervised by H. K. Ferguson Co., Cleveland, Ohio, engineers and managers of the Dow project at which the firm's new synthetic textile fiber, Zefran, will be produced.

Dacron Identity Tags

A hang-tag program to identify fiber content in men's and boys' suits, sport coats and slacks containing 65% or more Dacron polyester fiber in blends with cotton will be launched by Du Pont for the 1958 retail selling season. The action is being taken following retailers' and manufacturers' endorsement of a previous hang-tag program for blends of 55% or more Dacron with rayon. The earlier program, which applies to garments on sales during the coming Fall retail season, will be continued.

Brick Heads New Firm

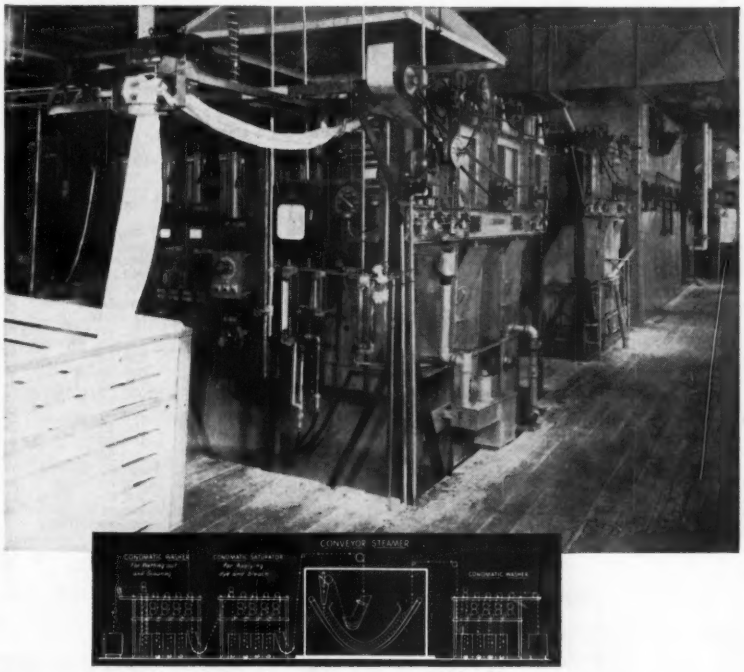
A new company named Intex Chemical Corp. has been formed for the manufacture and sale of textile and industrial chemicals and auxiliaries. Leon P. Brick, who was associated with Onyx Oil & Chemical Co. for 30 years, has resigned his post as executive vice president, in order to serve as president of the new firm. Intex which is completing organization of its research and production staffs, has its main office and plant at 167 Main St., Lodi, N. J.

New Bancroft Licensees

Joseph Bancroft & Sons Co. has announced the granting of license applications to domestic and foreign firms which desire to produce Bancroft trademarked fabrics. Three new "Everglaze" licensees are: Adamjee Cotton Mills, Ltd., Pakistan; Silver Springs Bleaching & Dyeing Co., Ltd., England, and Piraiki-Patraiki Industrie de Cotton, S. A., Greece. Pioneer Valley Finishing Co., Holyoke, Mass., and Fabric Finishing Co., Passaic, N. J., have been granted authority to produce Bancroft's "Minicare" knit fabrics.

(Continued on Page 97)

ANOTHER PROCTOR CONTINUOUS BLEACH RANGE AT WORK FOR P. H. HANES



The second Proctor Continuous Bleach Range—recently installed at P. H. Hanes Knitting Company of Winston-Salem, N.C.

This Proctor Continuous Bleach Range was put into operation at the P. H. Hanes Knitting Company of Winston-Salem, N.C., early this year. The Hanes management was so impressed by the outstanding performance of their first Proctor Range that they turned immediately to Proctor when additional capacity was needed.

Like so many other textile manufacturers, Hanes relies on the name Proctor, for it means dependability, economy and complete processing satisfaction. They know that Proctor equipment means more opportunity for profit.

- Re-runs eliminated
- Operating speeds up to 150 yards per minute
- Cost savings up to $11.00 per 1000 pounds bleached
- Amortized in 1½ years
- Eliminates sorting of batches for cutting room
- Insures cloth of excellent hand, whiteness, uniformity, shrinkage and absorbency
- Tremendous savings in water consumption
- Saves space—easily arranged to suit your plant.

Stop in and visit us at Booth #557 at the Knitting Arts Show at Atlantic City, N.J., April 29 to May 3.

Proctor

PROCTOR & SCHWARTZ, INC.

Philadelphia 20, Pa.

Manufacturers of Textile Machinery and Industrial Drying Equipment

U. S. MAN-MADE FIBER PRICES

This schedule lists the prices of yarns, staple and tow as reported by the producers in March, 1957. All prices are given as subject to change without notice.

RAYON FILAMENT YARN

American Bemberg

Current Prices

Regular Production Reel Spun Yarn

Den/Fil	No Twist Skeins	Twisted* Skeins & Cones	8½ Turns	High Twist Skeins & Cones 12 Turns	15 Turns	18 Turns
40/30	$1.49	$1.95	....	....	....	$2.08
50/36	1.24	1.50	....	....	....	1.72
65/45	1.14	1.30	....	$1.53	....	1.58
75/60**	1.04	1.18	....	1.41	$1.46	1.49
100/74**	.95	1.08	....	1.33	1.38	1.44
125/60	.94	1.05	$1.09	1.30	....	....
150/120	.93	1.02	1.12	1.27	....	....
300/225	....	.95	....	....	1.08	....

* Twist includes twists up to 6 turns on 40 and 50 denier, and up to 5 turns on heavier deniers.
** Spun Dyed Cupracolor Black 15¢ per lb. extra.

"44" HH Spool Spun Yarn

Den/Fil	No Twist Tubes	No Twist Beams	5 Turn Beams	5 Turn Cones	12 Turn Beams	12 Turn Cones	15 Turn Cones
40/30	$1.35	$1.35	....	....	....	....	....
50/36	1.00	1.00	....	....	....	....	....
65/45	1.05	....	....	....	....	$1.42	....
75/45*	.97	....	$1.08	$1.08	$1.31	1.31	$1.39
100/60*	.89	....	1.03	1.03	1.23	1.23	1.31
125/60	.84	....	.99	.99	....	....	....
150/90*	.77	....	.81	.81	1.15	1.15	1.24
150/120	.81	....	....	.93	....	....	....

* Available also in Spun Dyed Cupracolor Black at 15¢ per lb. extra.

Nub-Lite (Short Nubbi)

Code	Den/Fil	2½ Twist Skeins	2½ Twist Cones*	5 Twist Skeins	5 Twist Cones*
1516	150/90	....	....	$1.45	$1.35
1517**	150/90	....	....	1.45	1.35
2000	200/120	....	....	1.06	.96
2025***	200/120	....	....	1.06	.96
3000	300/180	$1.10	$1.00	....	....
4000	400/224	1.10	1.00	....	....
6000	600/360	1.08	.98	....	....
8000	860/450	1.08	.98	....	....

* Basic price for cones when dyed. Dyed Colors 30 and 35 cents above basic price. Prices based on 200 lb. dyed lots only. Prices for natural yarn on cones same as skein prices.
** Code 1517 can be run in warp or filling.
*** Code 2025—Softer than 2000.

CUPIONI Type B

Code	Den/Fil	No Twist Skeins	2½ Twist Cones	5 Twist Cones
9600	50/30	$1.39	....	$2.14
9640	70/45	1.29	$1.64	....
9656	100/60	....	1.48	....
1540	150/90	....	1.25	....
9710	200/120	....	1.20	....
9734	275/135	....	1.10	....
9790	450/225	....	1.10	....
9813	600/372	....	1.07	....

Spun Dyed Cupracolor Black 35¢ per lb. extra. This applies to all deniers.

Long Type A

Code	Den/Fil	2½ Twist Cones	5 Twist Cones
9686	150/135	$1.20	$1.25
9738	275/135	1.05	1.10
9780	450/372	1.05	1.10
9815	600/372	1.02	1.07
9826	900/372	.95	1.00
9876	1250/372	.95	1.00
9925	2500/744	.95	1.00

Modified Type C

Code	Den/Fil	5 Twist Cones
9662	100/60	$1.43
9688	150/120	1.25

Terms: Net 30 days, F. O. B. shipping point. Minimum freight allowed to consignee's nearest freight station east of the Mississippi River. To points west of the Mississippi River minimum freight allowed to Memphis, Tennessee. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates is sold F. O. B. delivery point.

American Enka Corp.

Current Prices
Effective December 4, 1956
Standard Quality Yarns

Standard Quality Rayon Yarns

A. Natural

Den./Fil.	Luster	Turns	Weaving Cones	Beams	Skeins Long	Skeins Short	Cakes	Knitting Cones
50/18	E	5 S						1.56
75/10	B	3 S&Z					1.08	
75/18	E	4 S						1.22
75/30	B	2.5,4S&Z	1.17	1.17			1.08	1.17
75/30	B	8 S	1.22			1.37		1.22
75/45	P,E	2.5, 4,5S&Z	1.17	1.17	1.23	1.37	1.08	1.17
75/60	B,P	3,4 Z	1.22				1.10	1.22
100/14	B,P	3 S&Z				1.12	.96	
100/40	B,E	12 S						1.27
100/40	B,P,E	4,5 S&Z					.96	1.04
100/40	B	6 S	1.10					
100/40,60	B,P	2.5,4S&Z	1.04	1.04	1.08	1.12	.96	1.04
100/60	E	2.5 S	1.06	1.06			.98	
125/40	E	3 Z						.96
150/40	B,P,E	2.1,3S&Z	.91	.91	.94	.99	.86	.90
150/40	B,E	5 S&Z	.91		.94	.99	.86	
150/40	B,E	8 S&Z	.97		1.00	1.05		
150/40	B,P	10 S&Z	1.03	1.03				
150/90	B,E	2.1 S&Z	.92	.92			.87	
200/40	P	3 Z						.82
200/40	B,P	8 S				.95		
250/60	P,E	2.4 Z						.75
300/50	B,E	3 S	.73	.73				
300/60,120	B,P,E	2.1 S&Z	.73	.73		.76	.71	.73
300/60	B	3.5 S	.73	.73		.76	.71	
300/60	B	4.3 S	.76	.76			.74	
300/60	B	7 S	.83					
300/40,120 H.T.	B	2.5, 3,4S	.75	.75				
450/80	B	3 S	.70	.70		.72	.68	
600/80,120	B,E	3 S	.69	.69			.67	
900/120	B	3.4 S	.68				.66	
900/120 H.T.	B	3.6 S	.70				.68	

"Jetspun" Colored Yarns

Den./Fil.	Tenacity	Turns	Weaving Cones	Beams*	Cakes	Colors
100/40	Regular	2.5S	1.39	1.39		All
150/40	Regular	2.1S	1.26	1.26		All
200/40	Regular	8.3S	1.27			All
450/80	Regular	3.0S	1.05			All
300/40	High	3.4S	1.10	1.10		All
600/80	High	3.4S	1.06			All
900/120	High	3.4S	1.05	1.05		All

Registered trade mark of American Enka solution dyed rayon yarn.
* Single color.

American Viscose Corp.

Effective December 14, 1956

Graded Yarns

Denier	Filament	Type	Short Skeins	Long Skeins	All Cones Beams Tubes	Cakes
50	20	Bright & Dull	$	$1.59	$1.56	$1.45
60	10	Bright	....	....	1.41	1.30
75	10-30	Bright	1.24	1.20	1.17	1.08
75	30	Dull	....	....	1.17	1.08
100	14-40	Bright	1.12	1.07	1.04	.96
100	60	Dull	....	....	1.06	.98
150	24-40-60	Bright & Semi-Dull	.99	.94	.91	.86
150	40	Dull	....	....	.91	.86
150	90	Dull	....	....	.92	.87
200	10-44	Bright	.90	.85	.82	.78
250	60	Semi-Dull & Dull	.82	.78	.75	.73
300	44	Bright & Dull	.79	.76	.73	.71
300	234	Dull	....	....	.75	.73
450	100	Bright	....	.72	.70	.68
600	100	Bright	....	.71	.69	.67
900	60-100-150	Bright	....	.70	.68	.66
1200	75	Bright	....	.67	.65	....
2700	150	Bright	....	.70	.68	....

Extra Turns Per Inch

75	30	Bright 6-Turns	$1.36	$1.32	$1.29	$ ....
100	40	Bright 6-Turns	1.24	1.19	1.16	1.08
150	40	Bright 6-Turns	1.09	1.04	1.01	.96
300	15	Bright 5-Turns	....	....	.78	....
300	45	Bright 6-Turns	....	.86	.83	.81
600	30	Bright 5-Turns	....	.76	.74	.72

Rayflex Yarns

150	60	Rayflex	$	$	$ .94	$ .89
300	120	Rayflex	....	....	.75	.73
450	120	Rayflex	....	....	.72	.70
600	234	Rayflex	....	....	.71	.69
900	350	Rayflex	....	.72	.70	.68

British Nylon

(Continued from Page 60)

Another interesting Terylene development was the first curtain net woven with an untarnishable, unbreakable gold or silver thread, called Jeweled Clarylene. One of the advantages claimed for this is that it acts as an air filter and keeps a high percentage of air pollution from rooms.

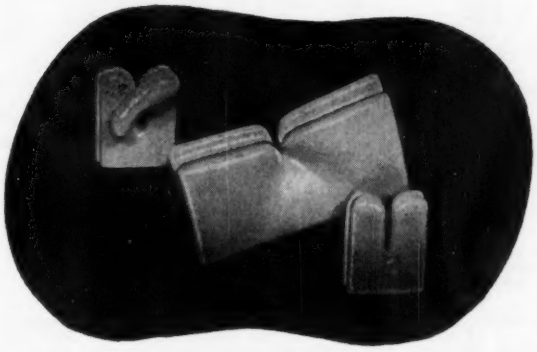
The Calico Printers' Association were demonstrating their new "Romiley" finish which gives a finer, softer handle to nylon fabrics. They were also showing roller-printed and screen-printed nylons with deep rich colors and designs. The first all-nylon table cloths were also on show. These were easy-to-wash, quick-drying seersucker in gay check designs and a labour-saving nylon damask, which has been developed after four years' research.

An interesting combination of nylon, Taslan and acetate was shown in a new range of fabrics by the West Cumberland Silk Mills. These fabrics are for day, afternoon and evening wear and replace the prewar crepes in character.

There were also many attractive plastic household textiles. One was the "Fabrilon" polythene which has the appearance and touch of hand embroidered linen. These plastic fabrics are available as table cloths from 70 cents retail in a variety of attractive colors.

The United States is now selling in competition with home makers in the British market. There was much interest in the range of coats offered by Plymouth of Boston, who are using as their slogan "America sends you . . ." And Du Pont making quite sure that everyone knew that they had created Taslan. ■

The future is our concern—
the present does not satisfy us.



We who are responsible for the high quality of

LAMBERTVILLE THREAD GUIDES

are always looking to the future too—looking for new ways to make our guides even harder, smoother and longer wearing. Our research in ceramics goes on constantly and is one of the reasons why our guides give the greatest economy and best service possible. Available in white or "Durablu" finish.

LAMBERTVILLE CERAMIC
AND MANUFACTURING COMPANY
LAMBERTVILLE **NEW JERSEY**

The Laurel Leaf

BUSINESS MAGAZINE EDITION

You should know about . . .

LAUREL RUXITE RK

If you are not getting complete satisfaction from your present coning oil, we suggest that you get acquainted with this popular member of the Laurel family of quality products.

•

Laurel RUXITE RK is a light viscosity, clear, non-staining coning lubricant, blended especially to provide the highest lubrication without the disadvantages of high oil pickup.

•

It is being used with excellent results on all synthetic yarns, and may also be used on natural yarns and blends as well as on metallic and elastic yarns. The lubricants in Laurel RUXITE RK are chosen so as to minimize any tendency to tarnish metal or to attack laminating adhesives. RUXITE RK is finding increasingly wider acceptance for coning tricot yarns and oiling filling yarns for ribbons and other narrow fabrics. This is especially so where subsequent finishing is not desired. It is also used on novelty yarns where its light body helps it spread uniformly throughout the yarn.

•

Laurel RUXITE RK has great versatility from an application standpoint, too. The most satisfactory method is from oiling attachments on cone winders, but it may also be applied by spraying or by soaking, followed by subsequent extraction of any excess oil.

•

Why not explore the plus-values of this Laurel quality product today? A letter or postcard request will have a sample and more information on its way to you by return mail.

Laurel Brand

Laurel SOAP MANUFACTURING CO., INC.
TIOGA, THOMPSON & ALMOND STS., PHILA. 34, PA.

Warehouses: Paterson, N. J., Chattanooga, Tenn., Charlotte, N. C.

Thick and Thin Yarns

150	40-90	Bright & Dull	$	$	$1.15	$ ....
200	75	Bright & Dull	....	....	1.05	....
300	120	Bright & Dull	....	....	.95	....
450	100	Bright & Dull	....	....	.92	....
490	120	Bright & Dull	....	....	.95	....
900	350	Dull	....	....	1.00	....
920	120	Bright & Dull	....	....	1.00	....

Colorspun Yarns

Currently producing regular and high tenacity at premiums at $.35 per pound.

Viscose Filament Yarns

The following material deposit charges are required:

Metal Section Beams	$170.00 each
Wooden Section Beams	55.00 each
Wooden Section Beam Crates	30.00 each
Metal Section Beam Racks	75.00 each
Metal Tricot Spools—14" flange	30.00 each
21" flange	60.00 each
32" flange	150.00 each
Metal Tricot Spool Racks—14" flange	135.00 each
21" flange	100.00 each
32" flange	75.00 each
Wooden Tricot Spool Crates	20.00 each
Cloth Cake Covers	.05 each

Same to be credited upon return in good condition—freight collect.
Terms: Net 30 days.

Celanese Corp. of America

Current Prices
Effective December 14, 1956

Den.	Fil.	Twist		Beams	Cones	Cakes	Non Shrunk Tubes
#49 and #14 Production							
75/30/3	Bright			....	$1.11	$1.03	....
100/40/2Z	"			$.96	....	....	....
100/40/3	"			.98	.96	.91	....
100/40/5	"			....	1.02	.97	....
100/60/3	"			....	.97	.92	....
125/40/2Z	"			.94	.92	....	....
150/40/3	"			.89	.85	.80	....
150/40/2Z	"			.87	....	....	....
150/40/5	"			....	.91	.86	....
150/40/8	"			....	.97	.92	....
150/40/0	"	NS		....	.71	....	....
300/50/3	"			.72	.71	.69	....
300/50/0	"	NS		....	.63	....	....
#20 Production							
150/40/3	Bright			.87	.83	.78	....
150/40/0	"	NS		....	.71	....	....
150/40/2Z	"			.87	....	....	....
300/50/3	"			.72	.71	.69	....
300/50/0	"	NS		....	.63	....	....
#20 Production							
100/40/3	Dull			....	.96	.91	....
100/68/2Z	"			1.00	....	....	....
100/60/0	"			....	.93	....	....
100/60/5	"			1.04	1.02	.97	....
150/40/3	"			.87	.83	.78	$.77
150/40/0	"	NS		....	.71	....	....
150/90/3	"			....	.90	.85	....
250/60/0	"	NS		....	.67	....	....
250/60/3	"			....	.75	....	.70
#52 Thick & Thin Rayon							
150/60/3	Bright			....	1.15	....	....
450/120/3	"			....	.89	....	....

Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi River.
Prices subject to change without notice.
All previous prices withdrawn.
Note: Prices on unlisted items can be obtained upon request.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.
Current Prices
Effective with orders December 7, 1956

Bright and Dull

Den.	Fil.	Turns/ Inch Up to		(A) Cones, Beams, Tubes	Skeins	Cakes
40	20	3	Textile "Cordura"*	$1.90	$1.90	$1.85
50	20	3		1.63	1.63	
50	20	3	Textile "Cordura"	1.65	1.65	1.60
50	35	3	Textile "Cordura"	1.70	1.70	1.65
75	10	3		1.17	1.20	1.08
75	15	3		1.17	1.20	1.08
75	30	3		1.17	1.20	1.08
100	15	3		1.04	1.07	.96
100	40	3		1.04	1.07	.96
100	60	3	Bright	1.04	1.07	.96
100	60	3	Dull	1.06	1.09	.98
125	50	3		.96	.98	.90
150	40	3		.91	.92	.86
150	60	3		.91		
150	60	3	Textile "Cordura"	.92	.93	.87
150	90	3	Dull	.92	.93	.87
150	100	3	Dull	.92	.93	.87
200	35	3		.82	.84	.78
200	20	3		.82		
300	50	3.5		.73	.76	.71
300	120	3	Textile "Cordura"	.74	.77	.72
450	72	3		.70	.72	.68
600	96	3		.69	.71	.67
600	240	3	Textile "Cordura"	.70	.72	.68
900	50	3		.68	.71	.66
900	144	3		.68	.70	.66
1165	480	3	Textile "Cordura"	.68	.68	.65
1800	100	3		.68		
2700	150	3		.68	.70	
5400	300	3		.75		

Thick and Thin

100	40	3	#7	1.38		1.38
150	90	3	#7	1.15	1.16	1.15
150	90	3	#19	1.15	1.16	1.15
200	80	3	#7	1.05	1.06	1.05
200	90	3	#19	1.05	1.06	1.05
450	100	3	#7	.89	.90	.89
1100	240	3	#50	1.32		1.32
2200	480	3	#50	1.14		1.14

Fiber E

300	50	2½	.88
900	50	2½	.83
900	90	2½	.83
2700	150	2½	.88
2700	270	2½	.88
5400	540	2½	.88

(A) 2¢/lb. additional for cones less than 3# and tubes less than 2#.
Terms: Net 30 days.
Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.
* "CORDURA" and "SUPER CORDURA" are DuPont's registered trade-marks for its high tenacity rayon yarn.

Industrial Rayon Corp.

Effective December 21, 1956

Denier	Filament	Turns per In.	Type	2.8 Lb Cones	4.4 Lb Cones	Beams	2.2 Lb Tubes	4.4 Lb Tubes
100	40	2.5 "S"	Bright	1.04		1.04		
150	40	2.5 "S"	Bright	.91		.91		
150	40	2.5 "S"	Luster #4	.91		.91		
150	40	2.5 "S"	Bright intermediate strength	.92				
200	20	2.5 "S"	Bright	.82				
200	40	2.5 "S"	Bright	.82				
300	44	2.5 "S"	Bright	.73		.73		
300	80	2.5 "S"	Bright	.73		.73		
300	80	2.5 "S"	Luster #4	.73		.73		
300	80	2.5 "S"	Bright extra strong	.75		.75		
450	60	2.0 "S"	Bright		.70	.70		
600	90	1.5 "S"	Bright		.69	.69	.69	.69
900	50	2.0 "S"	Bright		.68	.68	.68	.68
900	150	1.5 "S"	Bright		.68	.68	.68	.68

Luster #4 is semi-dull.
Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges prepaid with transportation allowed at lowest published rate to all points east of the Mississippi River. PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

North American Rayon Corp.

Current Prices

First Quality Yarns	Den/Fil	Twist	Cones Knitting* Cones	Cones No Twist Knitting Cones	Cones Beams, Tubes** and Weaving Cones	Untreated Cakes
	75/30	3.5			$1.17	$1.08
	75/30	7			1.30	
	75/30	15			1.37	
Normal	75/30	20			1.40	
Strength Yarns	100/40/60 Brt.	3.5			1.04	.96
NARCO	100/40/60	12			1.22	
	125/52/60	3			.96	.90
	125/52	10			1.13	
	150/42/60/75	3	$.90		.91	.86
	150/42	0		$.71		
	300/75	3	.73		.73	
	300/75	0		.63		
	300/75	6			.83	
	600/98	3	.69		.69	
	900/46	2.5	.68		.68	
	1800/92	2.5	.68		.68	
Semi-High	300/75 Brt.	6			$.84	
Strength Yarns	300/75	3			.74	
Hi-NARCO						

* Oiled Cones $.01 Per Pound extra for Graded Yarns only.
** 1 lb. tubes $.02 Per Pound extra for Graded Yarns only.
Terms: Net 30 days, F.O.B. shipping point, minimum freight allowed to consignee's nearest freight station east of the Mississippi River. To points west of the Mississippi River minimum freight to Memphis, Tennessee allowed. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates is sold F.O.B. delivery point.
Prices subject to change without notice.

RAYON HIGH TENACITY YARN and FABRIC

American Enka Corp.

Effective November 1, 1956

Tempra (High Tenacity)

Denier	Elongation	Beams & Cones
1100/480	Low	.59
1230/480	High	.59
1650/720	Low	.55
1820/720	High	.55
2200/960	High & Low	.55

Suprenka (Extra High Tenacity)

1650/720	Low	.58
1900/720	High	.58
2200/960	Low	.57

* Beams Only.
Terms: Net 30 days, f.o.b. Enka, North Carolina, or Lowland Tennessee; minimum freight allowed to first destination east of the Mississippi River.

Outlook (Continued from Page 30)

This brings up a point, which has been stressed before, and which has great importance for the textile and apparel industries in their competition with producers of other types of consumers' goods and services. The average consumer who walks into a store has no way at all of knowing the quality of most textile apparel items. Fiber identification is of little or no help. This is why various manufacturers have made claims for their products, either in advertising or in labels attached to the garments or in both.

But unless these claims are based on some generally understood and reasonable standard, some producers end up by claiming too much. The consumer is then disappointed and disillusioned, and becomes suspicious of all claims. Meanwhile, the retailer refuses to pay a little more for better quality, unless there is some way of explaining to the customer why the additional cost is justified.

How to Let Consumer Know—One of the chief problems of the textile and apparel industries, therefore, is to get across to the consumer the fact that satisfactory garments, of high quality, can be made, and to combine in some way in identifying and advertising such garments. This is the only way to create a demand at the consumer level for what consumers actually seem to want, that is, good quality along with good styling. The industry can easily provide this, but so far it has found no way to identify it at the retail level, so that the consumer can recognize and exercise her choice. Here is a task for the industry to tackle.

Europe (Continued from Page 63)

New Finnish Nylon Hosiery Plant—Finland's most modern nylon hose plant, located at Tornio, near Swedish border, is about to get underway. It is importing nylon yarn from France, Switzerland and Holland. Fully automatic, it will start out producing 1.3 million pairs of hose a year. Plans call for raising this output to four million. About half of eventual production will be exported.

U. K. Sales Breakdowns—Slightly over half of Britain's 1956 domestic rayon staple fiber deliveries went to cotton spinning producers (35.9 million pounds, against year's total of 68.2 million). Wool spinning mills took 14.2; exports, 6.9; flax spinning, 5.7; jute, 1.5. Staple deliveries to home market in 1956 jumped 24%, but exports fell 48% compared with 1955.

Continuous filament yarn deliveries by British rayon mills last year were heaviest to weaving mills: 20.9 million pounds, compared with the total of 56.4 million lbs. Industrial users consumed another 15.4 million lbs; exports, 7.9; hosiery, 5.2; warp knitting, 4.4, and narrow fabrics, 1.4 million lbs. Overall British domestic shipments of filament yarn were off 2% from 1955, but exports jumped by 17%.

U. K. Man-Made Fiber Record—Britain set a man-made fiber production record in 1956, with output averaging 40.2 million lbs. a month. Rise was due to soaring production of staple, 21.3 million (from 19.9 in 1955), which overcame drop in continuous filament yarn output (18.9 million lbs. monthly average from 19.4 in 1955).

New Dobeckmun Licensees

Dobeckmun Co. has granted licenses to Reynolds Metals Co., Standard Yarn Mills and Continental Can Co. for the manufacture of Dobeckmun metallic yarn made of metalized polyester film. Fairtex Corp was granted a similar license last May. Under the Dobeckmun-owned patent, an ultra-high vacuum deposition of aluminum is made on Mylar polyester film which is then bonded to one or two additional layers of Mylar film.

New Book on Polymers

Written with the industrial research worker in mind, a new book, "Fibres, Plastics & Rubbers", by W. J. Roff, offers extensive chemical, physical and general information on common high polymers. These include materials composed of relatively simple recurring units which, in aggregation, give rise to unique properties and find important technical application in the shape of fibers, films, plastics and rubbers. The book also serves as a practical introduction to the properties, identification and utilization of these increasingly important materials. The book is bound in hard covers, contains 400 pages and an index. Published by Academic Press, 111 Fifth Ave,. New York City, the price is $10.

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ENGINEERED *Plastics*
INCORPORATED
Gibsonville, North Carolina

American Viscose Corp.

Effective November 1, 1956
Revised November 14, 1956

Super Rayflex

Denier	Filament	Twist	Beams	Cones
1100	490	0	$.63	$.63
1100	490	4.1Z	.63	....
1650	980	0	.58	.58
1650	980	4.1Z	.58	....
2200	980	0	.57	.57

Tire Yarn

1100	490	2.5Z	.59	....
1650	980	0	.55	.55
1650	980	3.2Z-3.6Z	.55	....
2200	980	0	.55	.55

High Strength

1150	490	2.5Z	.59	.59
1230	490	3.6Z	.59	.59
1650	980	3.5Z	.55	.55
1875	980	3.6Z	.55	.55

Super Rayflex, Tire Yarn and High Strength yarns are sold "Not Guaranteed for Dyeing."

Tire Fabric

	Tire Yarn	Super Rayflex
1100/490/2	$.69	$.73
2200/980/2	.635	.655

Above prices based on 80% minimum Carcass, 15% maximum Top Ply, 5% maximum Breaker.

1650/980/2

* Production Factor

525	Open	Carcass	$.635	$.665
300	490	Top Ply	.645	.675
115	275**	Breaker	.67	.70

* Determined by dividing total ends by picks.

** Orders limited to 5% of total 1650 Fabric booked for any given period.

The following deposit charges are made on invoices:

Beams	$55.00 each
Crates (Metal)	75.00 each
Fabric Shell Rolls	3.50 each

Same to be credited upon return in good condition—freight collect
Terms: Net 30 days.

Celanese Corporation of America

Effective December 27, 1955
Supersedes September 12, 1955

Fortisan Yarn Prices

Denier	Packages	Natural	Black
30/2.5/40	2 lb. Cones	$3.00 lb.	$3.35 lb.
60/2.5/80	4 " "	2.40 "	2.75 "
90/2.5/120	4 " "	2.25 "	2.60 "
120/2.5/160	4 " "	2.05 "	2.40 "
150/2.5/180	4 " "	1.95 "	2.30 "
270/2.5/360	4 " "	1.85 "	2.20 "
300/2.5/360	4 " "	1.85 "	2.20 "
60/2.5/80 Olive Green—Spun Dyed—OG106	4 lb. Cones		3.50 lb.

Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U. S. A. east of the Mississippi River.

Prices subject to change without notice.
All previous prices withdrawn.
Note: Prices on unlisted items can be obtained upon request.

Fortisan-36 Rayon Yarn
Bright

Denier and Filament	Twist	4# cones	8# cones	Tubes	Beams
270/280	0.8Z	$2.30			
300/280	0.8Z	$2.05			
400/400	0.8Z	$1.75			$1.70
400/400	0			$1.75	
800/800	0.8Z	$1.25	$1.25		$1.20
800/800	0			$1.25	
1600/1600	0.8Z	$1.15	$1.15		$1.10
1600/1600	0			$1.15	

Terms: Net 30 days. Shipments prepaid to any destination in U. S. A. East of the Mississippi River. Shipments West of the Mississippi will be made on a collect freight basis and allowance will be made for the lowest transportation cost to the point of river crossing.

Prices subject to change without notice.
All previous prices withdrawn.
Note: Prices on unlisted items can be obtained upon request.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.
Current Prices
Effective with shipments October 29, 1956

"Super Cordura"*
(all packages)

1100	480	2	$.63
1250	480	2	.63
1650	720	2	.58
1900	720	2	.58
2200	960	2	.57
2450	960	2	.57

Terms: Net 30 days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

* "CORDURA" and "SUPER CORDURA" are DuPont's registered trade-marks for its high tenacity rayon yarn.

Industrial Rayon Corp.

Effective November 1, 1956

Unbleached Bright High Tenacity Yarns

SINGLE END BEAMS AND CONES:

Den.	Fil.	Turns Per In.	4.4 Lb. Cones	Beams	2.2 Lb. Tubes	4.4 Lb. Tubes
1100	480	1.5 "Z"	.59	.59	.59	.59
1650	720	1.5 "Z"	.55		.55	.55
2200	1000	1.5 "Z"	.54	.54	.54	.54
3300	1440	1.5 "Z"	.54	.54	.54	.54
4400	2000	1.5 "Z"	.54	.54	.54	.54

"Above Prices apply to Type 100. Type 200 Tyron Prices are 3¢ more."

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges allowed at lowest published rate to all points east of the Mississippi River.

Prices are subject to change without notice.

North American Rayon Corp.

High-Strength Yarns—SUPER-NARCO		Twist	Cones	Beams
1650	720	3Z		$.55
1850	720	3Z	$.55	
Super High Strength Yarns—				
1650	720	1.5Z	.58	.58

Terms: Net 30 days, f.o.b. shipping point. Minimum freight allowed to consignee's nearest freight station East of the Mississippi River. To points West of the Mississippi River minimum freight to Memphis, Tenn. allowed. Goods after shipment shall be at buyer's risk. Merchandise transported in seller's own trucks or those of its affiliates if sold f.o.b delivery point.

ACETATE FILAMENT YARN

American Viscose Corp.

Current Prices
Effective December 21, 1956

Bright and Dull

* Intermediate Twist

Denier & Filaments	Cones & 4-6 Lb. Tubes	Twister Tubes	Warps	Spinning Cones	Twist Warps
55/14	$1.04	$1.02	$1.05	$.98	$.99
75/20	1.00	.98	1.01	.94	.95
100/28	.95	.93	.96	.89	.90
120/32	.86	.84	.87	.80	.81
150/41	.77	.76	.78	.72	.73
200/54	.73	.72	.74	.69	.70
300/80	.69	.68	.70	.65	.66

* Standard Twist 2¢ additional.
Terms: net 30 days.

Celanese Corp. of America

Current Prices
Effective December 20, 1956

Bright and Dull

Denier and Filaments	Intermediate Twist 4 & 6-Lb Cones	Beams	4 & 6-TM Tubes	4-Pound Cheeses	Spinning Twist Cones	Beams	O Twist Tubes
45/13	$1.17	$1.18	$	$	$	$1.12	$ ....
55/15	1.04	1.05	....	....	.98	.99	.925
75/20	1.00	1.01	.98	....	.94	.95	.84
75/50	1.02	1.03	1.00	....	....	....	.89
100/26-40	.95	.96	.93	....	.89	.90	.81
120/40	.86	.87	.85	....	.80	.81	....
150/40	.77	.78	.77	.77	.72	.73	.69
200/52	.73	.74	.73	....	.69	.70	....
300/80	.69	.70	.69	....	.65	.66	.63
450/120	.67	.68	.67	....	.63	.64	....
600/160	.65	.66	.65	....	....	....	....
900/80-240	.63	.64	.63	....	....	....	.61

150 Denier 12-TM Tubes ..... .76
55/0/15 Dull Tricot Beams ..... .985
2-Pound Cheeses ..... .01 Less Than 4-Pound Cheeses
2-BU and 4-Bu Tubes ..... Same Price as 4 and 6-Lb. Cones
2-Lb. Twist Tubes ..... .01 Less Than 4 & 6-Lb. Twist Tubes on 120, 200 and 300 Denier Intermediate Twist

Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi River.

Prices subject to change without notice.
All previous prices withdrawn.
Note: Prices on unlisted items can be obtained upon request.

Celaperm Filament Yarn Prices

Denier and Filaments	Intermediate Twist 4 & 6-Lb. Cones	Beams	Spinning Twist Cones	Beams
55/15	$1.37	$1.38	$1.31	$1.32
75/20	1.34	1.35	1.28	1.29
100/26	1.28	1.29	1.22	1.23
120/40	1.19	1.20	1.13	1.14
150/40	1.11	1.12	1.06	1.07
200/52	1.05	1.06	1.01	1.02
300/80	1.01	1.02	.97	.98
450/120	.99	1.00	.95	.96
600/160	.97	.98	....	....
900/80	.94	....	....	....

3 to 5 Turns on Cones or Beams — $.02 Additional

Effective March 11, 1955

JACOBS

ONLY THE "Verybest" IS GOOD ENOUGH

Jake Jacobs says—

"For Box Looms and Heavy Work, Jacobs Plyweld Laminated Picker Sticks will out-wear all others. Try them and you'll be convinced!"

THE BULLARD CLARK COMPANY

JACOBS

SOUTHERN DIVISION
Charlotte, N. C.

NORTHERN DIVISION
Danielson, Conn.

(Continued from Page 91)

New Smith, Drum Officers

The board of directors of Smith, Drum & Co., Philadelphia, Pa. announced the election of the following officers: Harry S. Drum, chairman of the board; Robert N. Smith, president; Albert Bagian, vice president, and William H. Gray, treasurer. The new president is a grandson of Robert P. Smith, one of the two original founders of the company.

Personnel Changes

B. F. Bertland

Bernard F. Bertland has been appointed to the newly created post of director of advertising, merchandising, and promotion for Chemstrand Corp. **Dr. Robert W. Work** has joined the company as head of the fiber development section in the Textile Research Departments. He will serve in a liaison capacity between the research and sales divisions. **George C. Elmes** has joined Chemstrand as senior textile engineer.

Joseph J. T. Gleason has been appointed assistant sales manager of Reliable Sample Card Co.

Michael Lombardo has joined Universal Winding Co.'s service department as a specialist in looms and weaving.

L. K. Fitzgerald has joined the cotton merchandising division of J. P. Stevens & Co., Inc. in an executive capacity. His position will be one of liaison between the merchandising and production departments.

William Sperb has been named a vice president of the wholesale credit department of William Iselin & Co., Inc.

A. Durfee Damon has been appointed technical sales representative at Hudson Valley, N. Y. for Refined Products Corp.

S. A. Steere has retired from the vice presidency of Goodyear Fabric Mills after having been with the company since 1919. **William K. Wilder** has been named manager of Goodyear Fabric Mills.

(Continued on Page 101)

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Hoffner has specialized for 35 years on filament yarns, thrown natural or dyed to your own specifications.

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YARNS ON TUBES, CONES OR IN THE CAKE

Also spun synthetic yarns and worsted yarns.

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SALES REPRESENTATIVES

David F. Swain & Company, 105 W. Adams Street, Chicago 3, Ill. Shannonhouse & Wetzell, Johnston Building, Charlotte 2, N. C.

Celaperm Black Yarn Prices

Denier and Filaments	Intermediate Twist 4 & 6-Lb. Cones	Beams	Spinning Twist Cones	Beams
55/15	$1.17	$1.18	$1.11	$1.12
75/20	1.14	1.15	1.08	1.09
100/26	1.08	1.09	1.02	1.03
120/40	.99	1.00	.93	.94
150/40	.91	.92	.86	.87
200/52	.85	.86	.81	.82
300/80	.81	.82	.77	.78
450/120	.79	.80	.75	.76
600/160	.77	.78	....	....
900/80	.74	....	....	....

3 to 5 Turns on Cones or Beams — $.02 Additional

Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi River.

Prices subject to change without notice.

All previous prices withdrawn.

Note: Prices on unlisted items can be obtained upon request.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Acetate

Denier & Filament	Zero Twist Tubes	Zero Twist Beams	Low Twist Cones	Low Twist Beams	Intermediate Twist 2 & 4 Lb. ⅝" Tbs.	Intermediate Twist 4 & 6 Lb. Tw. Tbs.	Intermediate Twist Cones	Intermediate Twist Bms.
45-13	$1.10	$1.11	$1.11	$1.12			$1.17	$1.18
45-24	1.10	1.11		1.12			1.17	1.18
55-18	.925	.985		.99			1.04	1.05
55-24	.925	.985		.99			1.04	1.05
75-8	.94							
75-24	.84	.94	.94	.95		$.98	1.00	1.01
75-50	.89			.97		1.00	1.02	1.03
100-11	.90		1.04				1.04	
100-24	.81		.89	.90		.93	.95	.96
100-32	.81		.89	.90		.93	.95	.96
100-66	.83					.95	.97	.98
120-40	.77	.80	.80	.81		.85	.86	.87
120-50	.77	.80	.80	.81		.85	.86	.87
150-16	.72				$.81	.81	.81	.82
150-40	.69	.72	.72	.73	.77	.77	.77	.78
200-60	.68		.69	.70	.73	.73	.73	.74
240-80			.67				.71	
300-40	.63							
300-80	.63	.65	.65	.66	.69	.69	.69	.70
450-120	.63		.63	.64	.67	.67	.67	.68
600-80							.65	
600-160			.62	.63	.65	.65	.65	.66
900-44	.61		.62	.63	.63	.63	.63	.64
900-70	.61		.62	.63	.63	.63	.63	.64
900-240			.62	.63	.63	.63	.63	.64
1800-88			.60	.61	.61	.61	.61	.62
1800-140			.60	.61	.61	.61	.61	.62
2700-132			.60	.61	.61	.61	.61	.62
2700-210			.60	.61	.61	.61	.61	.62
3000-210					.61	.61	.61	.62
3200-160					.61	.61	.61	.62

(A) Regular Twist (2.9 thru 5 T.P.I.)—add $.02 to Intermediate Twist Price.

(B) 1 lb. ⅝" Tubes—add $.02 to 2 & 4 lb. ⅝" Tube Price.

(C) 2 lb. Twisted Tubes are the same as 4 & 6 lb. tubes except on 150, 200 and 300 denier Intermediate Twist where the price is $.01 less.

Color-Sealed

Denier & Filament	Zero Twist Tubes	Zero Twist Beams	Low Twist Cones	Low Twist Beams	Intermediate Twist Twisted Tubes 2 Lb.	Intermediate Twist Twisted Tubes 4 & 6 Lb.	Intermediate Twist Cones	Intermediate Twist Beams
55-18	$1.245	$1.315		$1.32	$1.35	$1.35	$1.37	$1.38
75-24	1.18	1.28	$1.28	1.29	1.32	1.32	1.34	1.35
100-32	1.14		1.22	1.23	1.26	1.26	1.28	1.29
150-40	1.03	1.06	1.06	1.07	1.10	1.11	1.11	1.12
200-60	1.00		1.01	1.02	1.04	1.05	1.05	1.06
300-40	.95						1.01	
300-80	.95	.97	.97	.98	1.00	1.01	1.01	1.02

(A) Regular Twist—Add $.02 to Intermediate Twist Price.

Black

Denier & Filament	Zero Twist Tubes	Zero Twist Beams	Low Twist Cones	Low Twist Beams	Intermediate Twist 2 & 4 Lb. ⅝" Tbs.	Intermediate Twist 4 & 6 Lb. Tw. Tbs.	Intermediate Twist Cones	Intermediate Twist Beams
55-18	$1.045	$1.115		$1.12		$1.15	$1.17	$1.18
75-24	.98	1.08	$1.08	1.09		1.12	1.14	1.15
100-32	.94		1.02	1.03		1.08	1.08	1.09
150-40	.83	.86	.86	.87		.91	.91	.92
200-60	.80		.81	.82		.85	.85	.86
300-40	.75	.77	.77	.78	$.81	.81	.81	.82
300-80	.75	.77	.77	.78	.81	.81	.81	.82
450-120			.75	.76	.79	.79	.79	.80
600-160			.73	.74	.77	.77	.77	.78
900-44	.72		.73	.74	.74	.74	.74	.75
900-70	.72		.73	.74	.74	.74	.74	.75
900-240			.73	.74	.74	.74	.74	.75

(A) Regular Twist (2.9 thru 5 T.P.I.)—add $.02 to Int. Twist Price.

(B) 1 lb. ⅝" Tubes—add $.02 to 2 & 4 lb. ⅝" Tube Price.

(C) 2 lb. Twisted Tubes are the same as 4 & 6 lb. Twisted Tubes except on 150, 200 and 300 denier Intermediate Twists where the price is $.01 less.

Specialty Yarns

Type 20	Same Price as Regular Yarn	
Type C	Same Price as Regular Yarn	
Type C—Thick & Thin		
100-22	Int. Twist 4 lb. Cones	$1.39

Denier & Filament	Natural Cones	Natural Beams	Black Cones	Black Beams	Color-Sealed Cones	Color-Sealed Beams
100-22 Int. Twist	$1.36					
200-64 Int. Twist	1.05		$1.15		$1.35	
200-64 Reg. Twist	1.08	$1.09	1.17	$1.21		
300-80 Int. Twist	1.00					

Terms: Net 30 days. Subject to change without notice.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Eastman Chemical Products, Inc.

Tennessee Eastman Co.

Effective December 21, 1956

"Estron"* Yarn, Bright or Dull — White

Denier & Filament	Regular Twist Cones	Intermediate Twist Cones	Intermediate Twist Tubes	Intermediate Twist Beams	Low Twist Cones	Low Twist Beams	Low Twist Tubes	Zero Twist Spun Twist	Tricot Beams Zero Twist
55/13	$1.06	$1.04	$1.02	$1.05	$.98	$.99	$.92½	$.99	$.98½
75/19	1.02	1.00	.98	1.01	.94	.95	.84	.95	....
75/49	1.04	1.02	....	1.03	....	....	....	....	....
100/25	.97	.95	.93	.96	.89	.90	.81	....	....
120/30	.88	.86	.84	.87	.80	.81	....	....	....
150/38	.79	.77	....	.78	.72	.73	.69	....	....
200/50	.75	.73	....	.74	.69	.70	....	....	....
300/75	.71	.69	....	.70	.65	.66	.63	....	....
450/114	.69	.67	....	.68	.63	.64	....	....	....
600/156	.67	.65	....	.66	.62	.63	.63	....	....
900/230	.65	.63	....	.64	....	....	.61	....	....
Heavier	....	....	....	....	....	....	.56	....	.56

Current Prices—December 19, 1955

"Chromspun"*—Standard Colors (Except Black)

Denier & Filament	Regular Twist Cones	Regular Twist Beams	Intermediate Twist Cones	Intermediate Twist Beams	Low Twist Cones	Low Twist Beams
55/13	$1.39	$1.40	$1.37	$1.38	$1.31	$1.32
75/19	1.36	1.37	1.34	1.35	1.28	1.29
100/25	1.30	1.31	1.28	1.29	1.22	1.23
150/38	....	....	1.11	1.12	1.06	1.07
300/75	....	....	1.01	1.02	.97	.98
450/114	....	....	.99	1.00	.95	.96
900/230	....	....	.94	.95	....	....

Current Prices

"Chromspun"*—Black

Denier & Filament	Regular Twist Cones	Intermediate Twist Cones	Intermediate Twist Beams	Low Twist & Spun Twist Beams
55/13	$1.19	$1.17	$1.18	$1.12
75/19	1.16	1.14	1.15	1.09
100/25	1.10	1.08	1.09	1.03
150/38	.93	.91	.92	.87
200/50	.87	.85	.86	.82
300/75	.83	.81	.82	.78
450/114	.81	.79	.80	.76
900/230	.76	.74	.75	....

Prices are subject to change without notice.

Prices on special items quoted on request.

Terms: Net 30 days. Payment—U. S. A. dollars.

Transportation charges prepaid or allowed to destination in the United States east of Mississippi River. Seller reserves right to select route and method of shipment. If Buyer requests and Seller agrees to a route or method involving higher than lowest rate Buyer shall pay the excess of transportation cost and tax.

* "Estron" and "Chromspun" are trade-marks of the Eastman Kodak Co.

RAYON STAPLE and TOW

American Viscose Corp.

Current Prices

Rayon Staple

	Bright and Dull
Regular	$ .29
Extra Strength	
1.0 Denier	.34
"Viscose 32A"	.36
"Avisco Crimped"	
1.25 Denier	.34
3.0 & 5.5 Deniers	.31
8.0 & 15.0 Deniers	.33
"Avisco Smooth"	
8.0, 15.0 & 22.0 Deniers	.35
Short Staple Blend	.34

Rayon Tow

Grouped Continuous Filaments (200,000 Total Denier)	
1.5, 3.0 & 5.5 Denier Per Filament	.32
9.0 Denier Per Filament	.34
Grouped Continuous Filaments (4400/300 & 2000/1500)	.65

Prices of other descriptions on request.

Terms: Net 30 days.

Celanese Corp. of America

Current Prices

Rayon Tow

	Bright & Dull
1.5, 3, 5 D.P.F.	.32
8 D.P.F.	.34

Courtaulds (Alabama) Inc.

Effective March 1, 1957

Rayon Staple

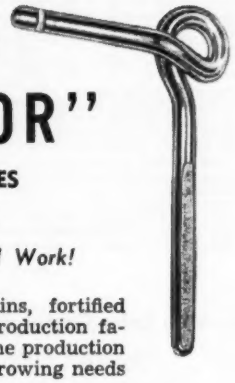
	Bright	Dull
1½ and 3 denier	$.29	$.29

Available in 1½", 1-9/16" and 2".

Specify

COLLINS "IRRIDIOR"

THREAD GUIDES



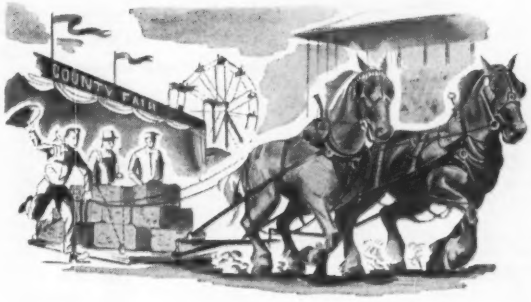
the finest in
Hard Chromium Plated Work!

For over 35 years—Collins, fortified with the technique and production facilities, has pioneered in the production of wire work to suit the growing needs of the textile industry.

And today, Collins "Irridior" Thread Guides are "tops" in the processing of Nylon and Rayon threads—because "Irridior" means harder, denser chrome-plating designed to last longer.

"For those who prefer Matte or Sandblast finish, try our Irridior Matte Finish F75."

COLLINS SUPPLY & EQUIPMENT CO.
1357-97 Monsey Ave. Scranton 2, Pa.



Are outworn RINGS a drag on your production?

The dollars invested in your spinning and twisting machinery can only pay you back through the traveler-ring bottleneck. For top speeds and good running work, let new DIAMOND FINISH rings smooth the way.

WHITINSVILLE (MASS.) SPINNING RING CO.
Makers of Spinning and Twister Rings since 1873
DIAMOND FINISH

Rep. for the Carolinas & Va.: W. K. SHIRLEY, 25 Oak St., Belmont, N C.
Rep. for Ala., Ga., & Tenn.:
P. C. EVERETT, 369 Meadowbrook Drive, N.E., Atlanta, Georgia

New Center Bar Winder

NOW M&W OFFERS A CHOICE OF 2 BATCHERS

Now you can install a center bar winder for any width cloth at considerable savings — because you don't pay for features you may not need. Our new winder offers substantial savings in initial cost and installation and is internally wired so that only leads are needed for connection to the power line. It retains the same construction advantages as Standard and Heavy Duty Batchers which are fully equipped with expander and traveling carriage.

M&W Tensionless Batchers and Winders are rugged, give increased rigidity for superior performance at high speeds . . . have all working parts totally enclosed . . . automatically wind at any desired tension or practically no tension at all, controlled by adjusting knob. Both are available for either light or heavy duty.

Write for complete data on the M&W Tensionless Batcher and Winder that will do your job best

Standard Batcher with expander and traveling carriage

MARSHALL and WILLIAMS CORPORATION
PROVIDENCE, R. I. • GREENVILLE, S. C. • NEW YORK, N. Y.

"Coloray" Spun Dyed Rayon Staple

	1½ Den. 1-9/16"	3 Den. 2"	4½ Den. 6"	Price per Lb.
	(Code numbers for color and denier)			
Black	1404	1419	1425	37¢
Tan	8004	8019	8025	39¢
Medium Brown	8804	8819	8825	39¢
Silver Grey	1004	1019	1025	39¢
Terra Cotta	8204	8219	8225	39¢
Khaki	3004	3019	3025	40¢
Dark Brown	8604	8519	8525	40¢
Slate Grey	0804	0819	0825	43¢
Light Blue	4004	4019	4025	44¢
Sulphur	2004	2019	2025	44¢
Apple Green	5104	5119	5025	45¢
Peacock Blue	4604	4619	4625	46¢
Medium Blue	4204	4219	4225	48¢
Dark Blue	4404	4419	4425	49¢
Hunter Green	5404	5419	5425	49¢
Indian Yellow	2504	2519	2525	49¢
Pink	6004	6019	6025	50¢
Turquoise	4804	4819	4825	50¢
Malachite Green	5204	5219	5225	51¢
Red	7004	7019	7025	56¢

(In addition to the above, Black is also available in:
1½ den. 1⅛" (1401) 3 den. 1-9/16" (1416) 4½ den. 2"
3 den. 1⅛" (1413) 3 den. 2½" (1420) 4½ den. 4")

Terms: Net 30 days, f.o.b. LeMoyne, Alabama. Minimum transportation allowed to points in U.S.A. east of Mississippi River.

The Hartford Rayon Co.

Div. Bigelow-Sanford Carpet Co., Inc.

Rayon Staple

Effective February 8, 1956

REGULAR

1.5 denier Bright
1½" and 2" ..... Withdrawn

VISCALON 44

15 denier 3" Dull ..... Withdrawn

VISCALON 66 (Crimped)

8 denier 2" Bright ..... 33¢
15 denier 3" Bright ..... 33¢
15 denier 3" Dull ..... 33¢

"KOLORBON"—Solution Dyed Rayon Staple

	8 Denier Bright	15 Denier Dull	15 Denier Bright
Cloud Grey	45¢	45¢	....
Sandalwood	45¢	45¢	....
Nutria	45¢	45¢	....
Sea Green	45¢	45¢	....
Mint Green	45¢	45¢	....
Champagne	45¢	45¢	....
Cafe Brown	....	....	55¢
Midnight Black	....	....	45¢
Gold	48¢	48¢	....
Turquoise	45¢	45¢	....
Melon	48¢	48¢	....
Light Blue	45¢	45¢	....
Charcoal Grey	45¢	45¢	....

Terms: Net 30 days. Prices are quoted f.o.b. shipping point, lowest cost of transportation allowed, or prepaid. To points West of the Mississippi, lowest cost of transportation allowed to the Mississippi River crossing.

ACETATE STAPLE and TOW

Celanese Corp. of America

Current Prices

Staple

Celanese Acetate Staple	Bright & Dull
2, 3, 5.5 & 8 Individual Deniers	$.32
12 & 17 Individual Deniers	.33
35 & 50 Individual Deniers	.36
⅝" to ⅞" cut length (all deniers)—Premium	.03
Variable Acetate Fibers	.30
35 Individual Denier Flat Filament Acetate	.38

Tow

Celanese Celatow Acetate	Bright & Dull
2, 3, 5.5 & 8 Individual Deniers	$.34
12 & 17 Individual Deniers	.35
35 & 50 Individual Deniers	.37

Terms: Net 30 days. Prices per pound F.O.B. shipping point, lowest transportation allowed to destination in U.S.A. east of the Mississippi River.

Prices subject to change without notice.
All previous prices withdrawn.

NON CELLULOSIC YARN

NYLON

Allied Chemical and Dye Corporation

Caprolan®†

Effective February 18, 1957

Denier	Filament	Turn/In.	Twist	Type**	Package	1st Grade Price/Lb	2nd Grade Price/Lb
200	32	¾	Z	B	Bobbin	$1.49	$1.44
210	32	1	Z	HB	Aluminum Tube	1.49	1.44
560	32	1	Z	HB	Aluminum Tube	1.39	1.29
840	136	½	Z	HBT	Aluminum Tube	1.30	1.20

Heavy Yarn

						Price/Lb.
2100	408	0	O	HB	Paper Tube*	$1.27
2100	112	0	O	HB	Paper Tube*	1.30
2500	408	0	O	HB	Paper Tube*	1.27
2500	112	0	O	HB	Paper Tube*	1.30
3360	544	0	O	HB	Paper Tube*	1.26
3360	168	0	O	HB	Paper Tube*	1.29
4200	680	0	O	HB	Paper Tube*	1.26
4200	224	0	O	HB	Paper Tube*	1.29
5000	816	0	O	HB	Paper Tube*	1.25
5000	280	0	O	HB	Paper Tube*	1.28
5800	952	0	O	HB	Paper Tube*	1.25
7500	1224	0	O	HB	Paper Tube*	1.24
10000	1632	0	O	HB	Paper Tube*	1.24
15000	2448	0	O	HB	Paper Tube*	1.23

Terms—Net 30 days.
Prices subject to change without notice.
All prices quoted F.O.B. Shipping Point.
Bobbins are invoiced at 45¢ ea.
Aluminum Tubes are invoiced at 40¢ ea.
* Paper Tubes non-returnable, no charge.
** Type is used to describe luster and tenacity

B—Bright.
H—High Tenacity.
T—Heat Stabilized.

Lowest freight cost prepaid or allowed east of Mississippi River, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

† Allied Chemical's polyamide fiber.

American Enka Corporation

Nylenka Filament Yarn Prices

Effective December 21, 1956

Denier & Filament	Twist	Luster	Tenacity	Package	Yarn Weight per Package	Price per Pound, Std.	Price per Pound, Sub.
15/1	0.5Z	semi-dull	Normal	Pirn	1 lb.	$5.25	$5.00
30/6	0.5Z	semi-dull	Normal	Pirn	2 lb.	2.36	2.21
40/8	0.5Z	semi-dull	Normal	Pirn	2 lb.	2.01	1.81
50/13	0.5Z	semi-dull	Normal	Pirn	2 lb.	1.91	1.76
100/24	0.5Z	semi-dull	Normal	Pirn	2 lb.	1.65	1.60
100/32	0.5Z	semi-dull	Normal	Pirn	2 lb.	1.65	1.60
200/34	0.5Z	bright	Normal	Pirn	2 lb.	1.49	1.44
200/34	0.5Z	bright	Normal	Cone	4 lb.	1.49	1.44
210/34	0.5Z	bright	High	Pirn	2 lb.	1.49	1.44
210/34	0.5Z	bright	High	Cone	4 lb.	1.49	1.44
840/140	0.5Z	bright	High	Pirn	2 lb.	1.30	1.20
840/140	0.5Z	bright	High	Cone	4 lb.	1.30	1.20
840/140	0.5Z	bright	High	Beam	—	1.30	1.20

Pirns charged at $.25 each. Deposit refunded upon return of pirn in good condition. Cones are non-returnable. Beams and cradles are deposit carriers and remain property of American Enka Corporation.

Terms: Net 30 days. Minimum common carrier transportation charges will be prepaid and absorbed to the first destination on or east of the Mississippi River. In prepaying transportation charges, seller reserves the right to select the carrier used.

The Chemstrand Corp.

Current Prices

Effective December 19, 1956

Denier	Filament	Twist	Type*	Package	Standard	Second
10	1	O	SD	Bobbins	$8.42	$7.81
15	1	O	SD	Bobbins	5.25	5.00
15	1	O	D	Bobbins	5.30	5.00
15	1	O	D	Spools	5.41	....
30	10	Z	SD	Bobbins	2.36	2.21
30	10	Z	HSD	Bobbins	2.36	2.21
30	26	Z	SD	Bobbins	2.49	2.21
40	7	Z	SD	Bobbins	2.11	1.75
40	13	Z	SD	Bobbins	2.01	1.81
40	13	Z	SD	Spools	2.11	....
40	13	Z	D	Bobbins	2.06	1.81
40	13	Z	D	Spools	2.16	....
40	13	Z	RD	Bobbins	2.06	1.81
40	13	Z	RD	Spools	2.16	....
50	17	Z	SD	Bobbins	1.91	1.76
70	34	Z	SD	Bobbins	1.71	1.66
70	34	Z	B	Bobbins	1.71	1.66
70	34	Z	D	Spools	1.86	....
80	26	Z	SD	Bobbins	1.71	1.56
100	34	Z	SD	Bobbins	1.65	1.60
100	34	Z	HB	Bobbins	1.70	1.60
140	68	Z	SD	Bobbins	1.60	1.55
200	34	Z	B	Bobbins	1.49	1.44
200	68	Z	SD	Bobbins	1.56	1.46
210	34	Z	HB	Bobbins	1.49	1.44
210	34	Z	HB	Spools	1.54	....
210	34	Z	HB	Beams	1.54	....
260	17	Z	HB	Bobbins	1.49	1.39
260	17	Z	HB	Spools	1.54	....
420	68	Z	HB	Bobbins	1.39	1.29
630	102	Z	HB	Bobbins	1.39	1.29
840	136	Z	HB	Tubes	1.34	1.24
840	140	Z	HB	Beams	1.30	1.20
840	140	Z	HB	Tubes	1.30	1.20

*Types: D—Dull; SD Semi-dull; B—Bright; H—High tenacity.

Bobbins are invoiced at 25¢ or 45¢ each, depending on type; tubes are invoiced at 40¢ each; spools invoiced at $77.00 and $95.00 depending on type; and beams and crates for beams are invoiced at $220 and $25 respectively.

Prices subject to change without notice.

News

(Continued from Page 97)

Arnold Hanchett has been appointed assistant director of development for Solvay Process Division, Allied Chemical & Dye Corp. He will retain his headquarters in Syracuse, N. Y. In the same division **Raymond B. Anthony** has been appointed manager of the newly formed special chemicals section, assisted by **Solon D. Fisher** and **Joseph L. Hake. George R. Barclay** has been named assistant to the manager of Solvay's organic chemicals section. **Fred P. Boehm** has been transferred from Solvay's New York sales office to the company's Pittsburgh sales office.

In the Detroit plant **William J. Bobek** has succeeded **James E. House** as manager. Mr. House has become assistant to the director of operations. **Paul B. Cornell** has been named assistant manager.

Lee F. Samler has been appointed general manager of Saran Yarns Co., in addition to his position as vice president of the company.

Paul N. Leech has been appointed representative in the Mid-Atlantic territory to handle the sale of fatty acids for Emery Industries, Inc.

Edward A. O'Neal, Jr., president of Chemstrand Corp., has been named chairman of the board of Chemstrand Limited in Northern Ireland. Also named to the board are **Sir Miles Thomas, Arvon L. Davies, R. J. Breyfogle**, and **R. C. G. Clarke.**

Herman L. Schwarz has been appointed New York District sales manager for textile dyestuffs and chemicals at Sandoz Chemical Works, Inc.

John J. Morris, III has been named district manager of the San Francisco sales office for National Vulcanized Fibre Co., succeeding **Walter M. Gallagher** who has become Detroit district sales manager. **Willard J. Wasson** has been appointed district sales manager of the company's newly opened office in Dallas.

Charles A. Haynes has been appointed works manager for Howard Bros. Mfg. Co., succeeding **Arnold W. Englund. E. Jack Lawrence** assumed the position of southern agent in addition to his duties as southern manager for the company.

Edwin R. Jerome, formerly president and general manager of Victor Ring Traveler Division of Saco-Lowell, died at the age of 62 after several months of illness.

*13¾" and 21" diameter heads

MILTON BEAMS*
(for Nylon and rubber yarns)
GIVE YOU THE BIG BONUS OF
SUPER STRENGTH

The super strength of Milton's forged head Tricot and Raschel Beams is no idle claim—it's been proven by yarn producers, big mills and small mills alike!

They're light in weight, yet rugged in design to give true dimensional stability without objectionable deflection or distortion. Milton's forged, heat-treated aluminum alloy heads and extra heavy barrels become a one-piece beam by the continuous weld process first introduced in the field by Milton. Trapped ends of yarn or misalignment of keyways are eliminated because there are no mechanical joints!

You name the yarn . . . monofilament, fine denier, low turn or high twist—synthetics or rubber, Milton gives you true-running, well balanced beams to handle unprecedented yardages and extreme pressures!

SEE OUR NEW 25" AND 30" HEAD DIAMETER ALUMINUM BEAMS AT THE KNITTING ARTS EXHIBITION . . . BOOTH 335

MILTON

Over a Quarter Century of Dependability in Yarn Beams
MILTON MACHINE WORKS, INC.
DESIGNERS • ENGINEERS • MANUFACTURERS
MILTON • PENNA.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

Nylon Yarn

Denier & Filament	Turns/Inch & Twist	Type	Package	1st Grade	2nd Grade
7-1	0	200	Bobbin	$9.47	$8.82
10-1	0	200	Bobbin	8.42	7.82
12-1	0	200	Bobbin	7.35	6.85
15-1	0	200	Tricot Bms.	5.36	....
15-1	0	200	Bobbin	5.25	5.00
15-1	0	680	Tricot Bms.	5.41	....
15-1	0	680	Bobbin	5.30	5.00
20-1	0	200	Bobbin	4.42	4.12
20-7	0.5Z	200	Bobbin	2.91	2.61
20-7	0.5Z	680	Bobbin	2.96	2.61
20-20	0.7Z	209	Bobbin	6.00	....
20-7	0.5Z	200	Tricot Bms.	3.02	....
30-10	0.5Z	200	Bobbin	2.36	2.21
30-10	0.5Z	200	Tricot Bms.	2.46	....
30-10	0.5Z	680	Bobbin	2.41	2.21
30-10	0.5Z	680	Tricot Bms.	2.51	....
30-26	0.5Z	200	Bobbin	2.49	2.21
40-7	0.5Z	200	Bobbin	2.11	1.75
40-13	0.5Z	200	Bobbin	2.01	1.81
40-13	0.5Z	200	Tricot Bms.	2.11	....
40-13	0.5Z	400	Bobbin	2.13	1.90
40-13	0.5Z	670/680	Bobbin	2.06	1.81
40-13	0.5Z	670/680	Tricot Bms.	2.16	....
40-34	0.5Z	200	Bobbin	2.21	1.81
50-17	0.5Z	200	Bobbin	1.91	1.76
50-17	0.5Z	680	Bobbin	2.01	1.76
70-17	0.5Z	200	Bobbin	1.71	1.66
70-34	0.5Z	100/200	Bobbin	1.71	1.66
70-34	0.5Z	300	Bobbin	1.76	1.66
70-34	0.5Z	680	Bobbin	1.76	1.66
80-26	0.5Z	200	Bobbin	1.71	1.56
100-34	0.5Z	200	Bobbin	1.65	1.60
100-34	0.5Z	300	Bobbin	1.70	1.60
100-34	0.5Z	680	Bobbin	1.70	1.60
100-50	0.5Z	200	Bobbin	1.71	1.60
140-68	0.5Z	200	Bobbin	1.60	1.55
140-68	0.5Z	300	Bobbin	1.65	1.55
200-34	0.7Z	100	Bobbin	1.49	1.44
200-34	0.7Z	680	Bobbin	1.54	1.44
200-68	0.7Z	200	Bobbin	1.56	1.46
210-34	0.7Z	300	Bobbin	1.49	1.44
210-34	0.7Z	300	Beam	1.54	....
260-17	1Z	100/300	Bobbin	1.49	1.39
400-68	0.7Z	100	Bobbin	1.39	1.29
420-68	1Z	300	Bobbin	1.39	1.29
780-51	0.7Z	300	Bobbin	1.39	1.29
800-140	0.5Z	100	Bobbin	1.39	1.29
840-136	1Z	300	Bobbin/Al. Tube	1.34	1.24
840-140	0.5Z	300/700	Al. Tbs/Beam	1.30	1.20

Color-Sealed Yarn

Denier & Filament	Turns/Inch & Twist	Type	Package	1st Grade	2nd Grade
70-34	0.5Z	140	Bobbin	$2.06	$2.01
200-34	0.7Z	140	Bobbin	1.84	1.79
260-17	1Z	140	Bobbin	1.84	1.79

Industrial Yarn

				Price/Lb.
2520-420	0	300/700	Paper Tube	$1.27
4200-700	0	300/700	Paper Tube	1.25
5040-840	0	300/700	Paper Tube	1.25
7560-1260	0	300/700	Paper Tube	1.24
10080-1680	0	300/700	Paper Tube	1.24
15120-2520	0	300/700	Paper Tube	1.23

These prices are subject to change without notice. Terms: Net 30 Days.

Types

Type 100—Bright, normal tenacity.
Type 140—Bright, color-sealed, black, normal tenacity.
Type 200—Semidull, normal tenacity.
Type 209—Semidull, normal tenacity.
Type 300—Bright, high tenacity.
Type 400—Semidull, high tenacity.
Type 670—Dull, normal tenacity.
Type 680—Dull, normal tenacity.
Type 700—Bright, high tenacity.

Freight Terms—Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Following are invoiced as a separate item.
Bobbins—25 cents or 45 cents depending on type
Aluminum Tubes—40 cents each
Tire Cord Beams—$220.00 each
Cradles for Tire Cord Beams—$115.00 each
Tricot Beams—$95.00 each
Cradles for Tricot Beams—$130.00 each
(Beams and Cradles are deposit carriers and remain the property of E. I. du Pont de Nemours & Co., Inc.)

POLYESTER

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

"Dacron"*

Denier & Filament	Turns/Inch	Luster	Type*	Tubes 1st Gr.
30-20	0	Dull	57	$2.86
40-27	0	Semidull	56	2.41
40-27	0	Bright	55	2.41
40-27	0	Dull	57	2.46
70-34	0	Semidull	56	$2.01
70-14	0	Bright	55	2.01
70-34	0	Bright	55	2.01
70-34	0	Dull	57	2.06
100-34	0	Semidull	56	$1.94
140-28	0	Bright	55	1.89
150-68	0	Semidull	56	1.91
220-50	0	Bright	51	1.84
250-50	0	Bright	55	1.86
1100-250	0	Semidull	59	$1.50
1100-250	0	Bright	51	1.50

Terms: Net 30 Days.

Domestic Freight Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Yarn Types

* Type:
Type 51—Bright, high tenacity.
Type 55—Bright, normal tenacity.
Type 56—Semidull, normal tenacity.
Type 57—Dull, normal tenacity.
Type 59—Semidull, high tenacity.

Tubes are invoiced as a separate item at $.70 each. The only exception to this is an $.80 charge on the tubes used for 30 Denier Dull.

All tubes are returnable for credit.

* "DACRON" is DuPont's registered trade-mark for its polyester fiber.

NON CELLULOSIC STAPLE & TOW

ACRYLIC

The Chemstrand Corp.

Current Prices

"Acrilan"

2.0 denier Semi-dull staple and tow	$1.18
2.5 denier Hi-Bulk Bright and Semi-dull staple and tow	1.12
3.0 denier Bright & Semi-dull staple and tow	1.12
5.0 denier Bright & Semi-dull staple and tow	1.12
8.0 denier Bright and Semi-dull staple and tow	1.12

Terms: Net 30 days. Freight prepaid to points east of the Mississippi River.

Carbide and Carbon Chemicals Co.

Div. Union Carbide and Carbon Corp.

Textile Fibers Dept.

Effective November 1, 1955

Dynel Staple

Natural Dynel	
3, 6, 12, and 24 Denier, Staple and Tow	$1.05 per lb.
Whitened Dynel, and Dynel Spun with Light Colors: Blonde, or Gray	
3 and 6 Denier, Staple and Tow	1.20 per lb.
Dynel Spun with Dark Colors: Black, Charcoal, and Brown	
3 and 6 Denier, Staple and Tow	1.30 per lb.

Prices are quoted f.o.b. South Charleston, W. Va.

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.

Current Prices

"Orlon"** Acrylic Staple & Tow

Type 42	1st Grade
1.0 Denier Semidull & Bright—Staple only	$1.48
2.0 Denier Semidull	1.33
3.0 Denier Semidull & Bright	1.28
3.0 Denier Semidull Color-sealed Black—Staple only	1.63
6.0 Denier Semidull & Bright	1.20
4.5 Denier Semidull	1.20
10.0 Denier Semidull	1.20

Tow—Total Denier 470,000
Staple Lengths—1½", 2", 2½", 3", 4½"
High Shrinkage Staple same price as Regular Staple

Type 39 $1.06

This product is designed for *woolen system spinning* and is a blend of predominately heavy deniers (average 4.2) with a variable cut length.

F.O.B. Shipping Point—Freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Terms: Net 30 Days.

** "ORLON" is DuPont's registered trade-mark for its acrylic fiber.

Eastman Chemical Products, Inc.

Tennessee Eastman Co.

Effective November 15, 1956

"Verel"*

Deniers	Dull and Bright
2, 3, 5 and 8	$1.10 per pound

Prices are subject to change without notice.

Terms: Net 30 days. Payment—U. S. A. dollars.

Transportation charges prepaid or allowed to destination in the United States east of the Mississippi River. Seller reserves the right to select route and method of shipment. If buyer requests and seller agrees to a route or method involving higher than lowest rate buyer shall pay the excess of transportation cost and tax.

* "Verel" is a trade-mark of the Eastman Kodak Co.

NYLON

American Enka Corp.

Nylenka (Nylon Six Staple)

Denier	Luster	Length (Inches)	Price per pound
3	semi-dull	1⅛, 1½, 2, 2⅝, 3, 4½	$1.28
6	bright	3, 4½	1.28
8	bright	2⅝	1.20
10	bright	3	1.20
15	bright	3	1.20

Deniers and lengths of staple not listed above are available upon special request.

Terms: Net 30 days. Minimum common carrier transportation charges will be prepaid and absorbed to the first destination on or east of the Mississippi River. In prepaying transportation charges, seller reserves the right to select the carrier used.

Purifying Finish

(Continued from Page 86)

washing in an automatic home washing machine. The odor level was judged at least socially acceptable in every case. I want to emphasize this excellent control of body odor was retained under a test that is much more severe than we would expect to meet in normal wearing.

ODOR LEVEL

MEN	UNTREATED FABRIC	TREATED FABRIC BEFORE WASHES	TREATED FABRIC AFTER 10 WASHES	TREATED FABRIC AFTER 20 WASHES
J	+2	-2	-2	-1
S	+2	-2	-1	-1
D	+2	-2	-2	0
W	+2	-2	-1	-1
N	+2	-1	-1	-1
F	+2	-2	-1	-1
L	+2	-1	-1	0
W	+2	-2	-2	-1

Fig. 15

Durable Control of Body Odor Level

Data are being collected under more practical conditions now. We are interested in what happens to normal people who wear treated garments in everyday activities. Our statistically designed wear tests now include over 100 people from all walks of life—salesmen, laboratory personnel, shipping clerks, secretaries, executive personnel and housewives. Activities such as skiing, golfing, dancing and skating as well as normal working conditions are included. One man who wore a treated T-shirt without change for seven days while working around the house reports no perceptible odor and his wife agrees.

Underwear worn through vigorous New Year's Eve partying, including hours of dancing, etc., showed the same freshness. Undergarments worn by the scurrying shipping clerks in the garment center showed no odor after days of wear. Even executive perspiration, which we know was produced in larger quantitites through emotional stress during the past budget period, passed the strictest tests. This protection against body odor was maintained not only initially but after repeated washes. It will be months before these tests are completed, but to date the results indicate that the performance shown in our laboratory experiments will be surpassed. Protection against body odor is being obtained however energetic the person's activities might be.

Where should our new purifying finish be used? With our increasing desire for cleanliness, purity and freedom from dangers of bacteria, Cyana Purifying Agent should certainly be used on all fabrics which come in contact with the body. Garments such as shorts, undershirts, pants, pajamas and lingerie, as well as bed sheets, pillow cases, and towels are definitely benefited by such a treatment.

Cyana Purifying Agent improves the performance of fabrics by imparting durable protection against the formation of body odor, by helping to maintain hygienic cleanliness and by increasing wear life. It should be used on all textiles for lasting freshness. ■

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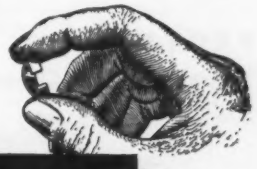

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E. I. du Pont de Nemours & Co.

Textile Fibers Dept.
Current Prices

Nylon Staple and Tow

Denier	Type	Staple Lengths	Tow Bundle	Price/Lb.
1.5	200	1½"—4½"	None made	$1.33
1.5	201	1½"—4½"	None made	1.35
3.0	100/200	1½"—4½"	430M	1.28
3.0	101/201	1½"—4½"	455M	1.30
6.0	100	1½"—4½"	330M	1.28
6.0	101	1½"—4½"	345M	1.30
15.0	100	1½"—6½"	330M	1.20
15.0	101	1½"—6½"	None made	1.22

Staple lengths are restricted to the range shown opposite each denier above. The actual cut lengths within these ranges are as follows:

1½, 1½, 2, 2½, 3, 4½ and 6½

Types

Type 100 Bright, normal tenacity, not crimpset.
Type 101 Bright, normal tenacity, crimpset.
Type 200 Semidull, normal tenacity, not crimpset.
Type 201 Semidull, normal tenacity, crimpset.
These prices are subject to changes without notice.
Terms—Net 30 Days.

Freight Terms—Terms are F.O.B. shipping point, freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

Industrial Rayon Corp.

Effective November 29, 1956

Nylon Staple

1.5 denier	$1.33 per lb.
2, 3 and 6 denier	1.28 per lb.
8 and 15 denier	1.20 per lb.

Bright and semi-dull, required length.

Terms: Net 30 days f.o.b. point of shipment; title to pass to buyer on delivery of goods to carrier. Domestic transportation charges prepaid with transportation allowed at lowest published rate to all points east of the Mississippi River.

POLYESTER

E. I. du Pont de Nemours & Co.

Textile Fibers Dept.
Current Prices

"Dacron"* Staple and Tow

Denier	Luster	Type	Length	Tow Bundle	1st Gr.
1.25	Semidull	54	1¼"-3"	....	$1.56
1.5	Semidull	54	1¼"-3"	....	1.51
3.0	Semidull	54	1¼"-4½" & Tow	375M-500M	1.41
4.5	Semidull	54	1¼"-4½" & Tow	375M-500M	1.41
6.0	Semidull	54	1¼"-4½" & Tow	375M-500M	1.41

Terms: Net 30 Days.

F. O. B. Shipping Point—Freight prepaid our route to points east of the Mississippi River within the continental limits of the United States, for points west of the Mississippi River freight allowed to the Mississippi River crossing nearest purchaser's mill if shipped overland, or port of exit of purchaser's choice east of Mississippi River.

POLYVINYL ACETATE

American Viscose Corp.

Effective October 1, 1956

"Vinyon"® Staple

3.0 denier ½" unopened	$.80 per lb.
3.0 " 1¼" unopened	.80 per lb.
3.0 " 1¼" opened	.90 per lb.
3.0 " 2" opened	.90 per lb.
3.0 " 2" unopened	.80 per lb.
5.5 " 1" opened	.90 per lb.
5.5 " 3½" opened	.90 per lb.
5.5 " 3½" unopened	.80 per lb.

Terms: Net 30 days.

PROTEIN

Virginia-Carolina Chemical Corp.

Fiber Division
Effective January 15, 1951

"Vicara" Staple

	Standard Crimp	Highly Crimped
3 Denier	$1.00 per lb.	$1.05 per lb.
5 Denier	1.00 per lb.	1.05 per lb.
7 Denier	1.00 per lb.	1.05 per lb.

Bleached "Vicara" Staple

	Standard Crimp	Highly Crimped
3 Denier	$1.10 per lb.	$1.15 per lb.
5 Denier	1.10 per lb.	1.15 per lb.
7 Denier	1.10 per lb.	1.15 per lb.

Staple length ½ to 6 in.
Supplied in staple lengths or as continuous tow (270,000 filaments).
Terms: Net 30 days.
Prices f.o.b. Taftville, Conn. on 10% moisture regain basis.

Wheelco Expands Service

Wheelco Instruments Division, Barber-Colman Co., Rockford, Ill., has announced expansion of sales and service facilities in various areas, including the following personnel appointments:

St. Louis—Harold Dirkers, branch manager. Cleveland—Howard Berger, manager; Norman H. Fertig, service staff. Detroit—Stanley Hanson, manager; George Hall, sales engineer. Atlanta—Louis D. Gercken, sales engineering staff. Los Angeles—Hyman Hacker and Shelton Cashbaugh, sales engineers; Robert B. Sanquist, service engineer. Philadelphia—Joseph S. McDonnel and John M. Schneider, service engineers; Henry L. Byrne, sales engineers. Pittsburgh—William C. England, service engineer Kenneth J. Munhall, sales engineer. Rockford—Herman J. Schneider, Edward J. Pasch and Roger S. Williams, application engineering group.

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Calendar of Coming Events

Apr. 3—AATT monthly meeting. Vanderbilt Hotel, New York, N. Y.
Apr. 4-6—American Cotton Manufacturers Institute annual meeting. Biltmore Hotel, Palm Beach, Fla.
Apr. 7-12—131st national meeting American Chemical Society. Miami, Fla.
Apr. 8-11—National Packaging Conference and Exposition. International Amphitheater, Chicago, Ill.
Apr. 10-12—Alabama Cotton Manufacturers Association annual meeting. Biloxi, Mo.
Apr. 23-24—National Knitted Outerwear Association annual meeting. Hotel Waldorf-Astoria, New York, N. Y.
Apr. 29—Underwear Institute annual meeting. Traymore Hotel, Atlantic City, N. J.
Apr. 29-30—Hosiery Industry Conference sponsored by NAHM. Claridge Hotel, Atlantic City, N. J.
Apr. 29-May 3rd—Knitting Arts Exhibition. Auditorium, Atlantic City, N. J.
Apr. 29-May 3—Materials Handling Exposition. Convention Hall, Philadelphia, Pa.
May 1-2—The Fiber Society, Spring meeting. Clemson House, Clemson, S. C.
May 1-3—Cotton Manufacturers Association of Georgia annual convention, Nassau, Bahamas.
May 4—Alabama Textile Operating Executives spring meeting. Auburn, Ala.
May 8—AATT monthly meeting. Vanderbilt Hotel, New York, N. Y.
May 20-25—National Cotton Week
May 28-29—Market Research Conference sponsored by National Cotton Council. Washington, D. C.
May 30-Jun. 1—Tufted Textile Manufacturers Association annual convention. Fontainebleau, Miami Beach, Fla.
Jun. 5—AATT monthly meeting. Hotel Vanderbilt, New York, N .Y.

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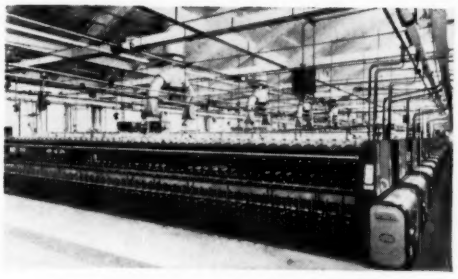

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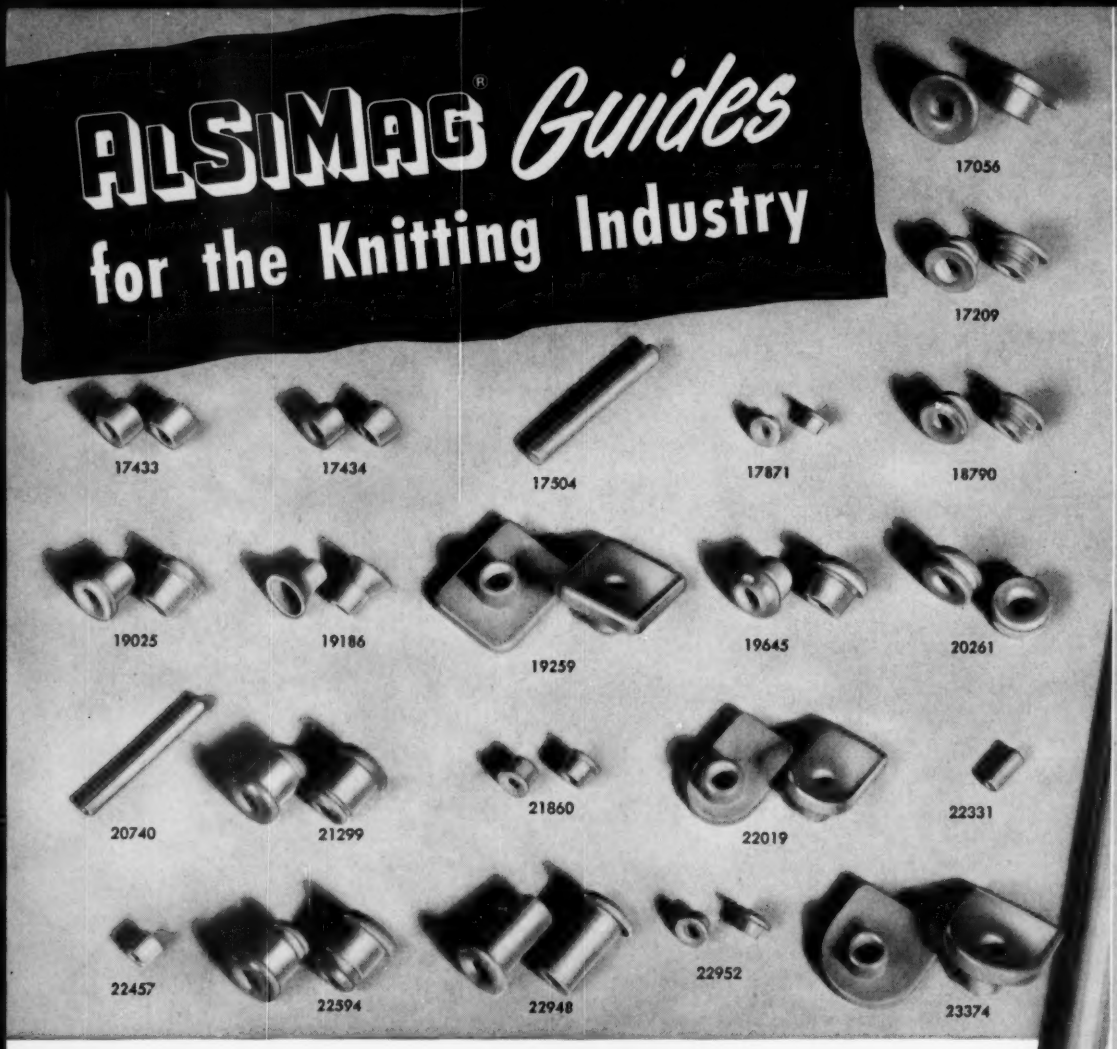

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4. *Uniformity* of guides makes for uniform high quality in finished products.

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